

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

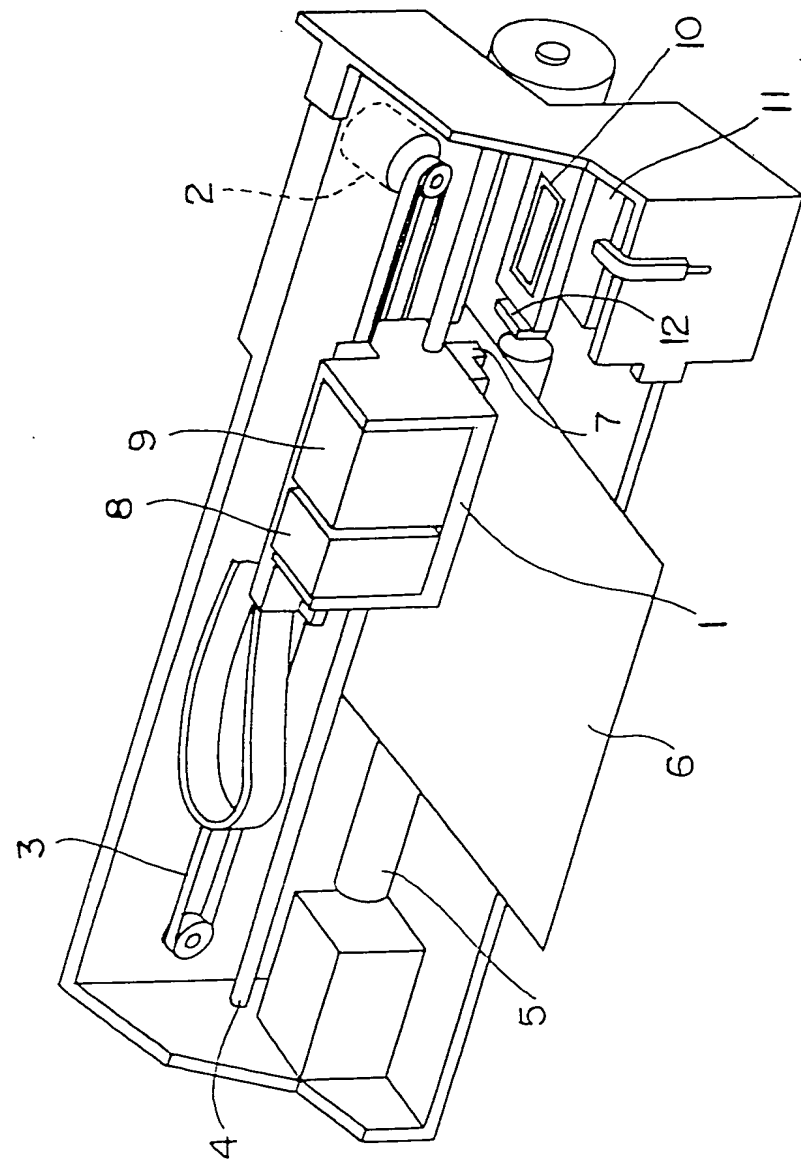
Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Fig. 1



[~~Fig. 2~~]

Fig. 2

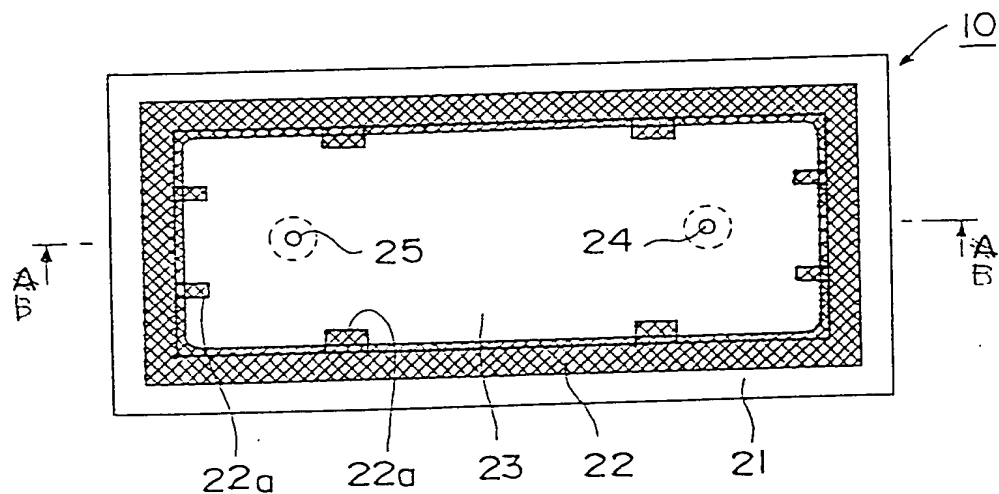
[~~Fig. 3~~]

Fig. 3

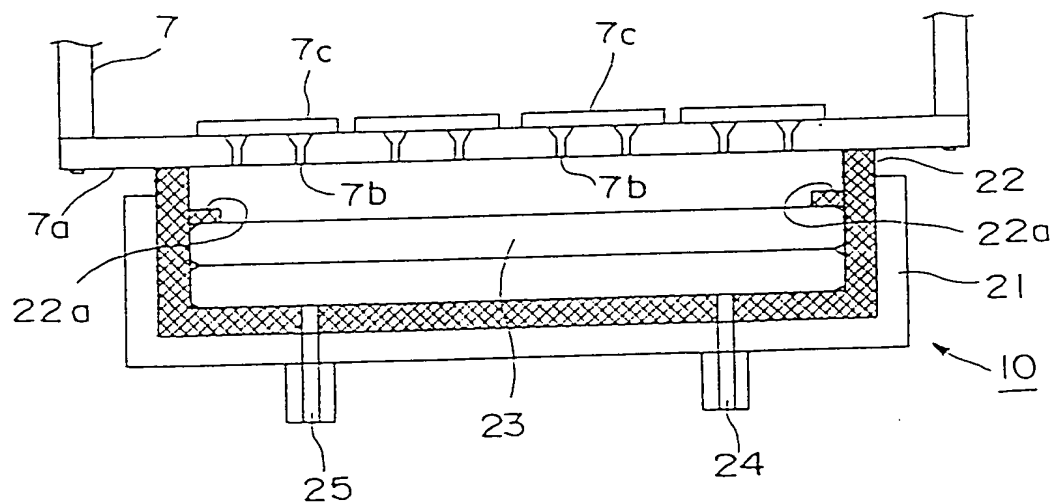


Fig. 4B

~~10T~~

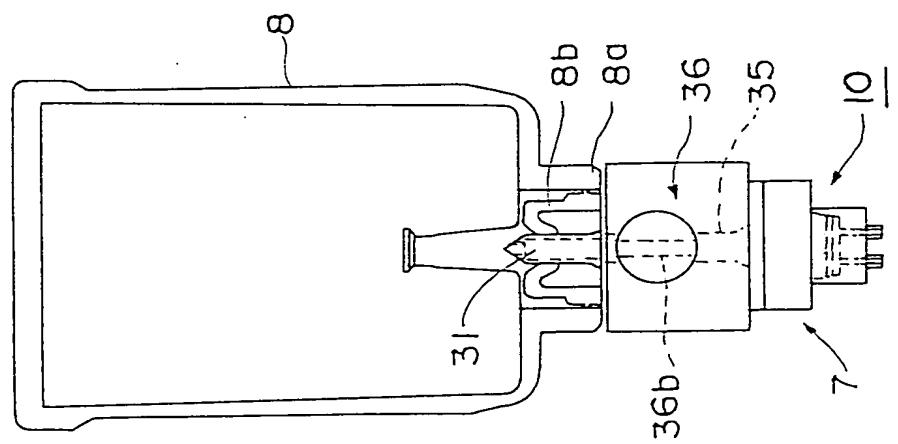
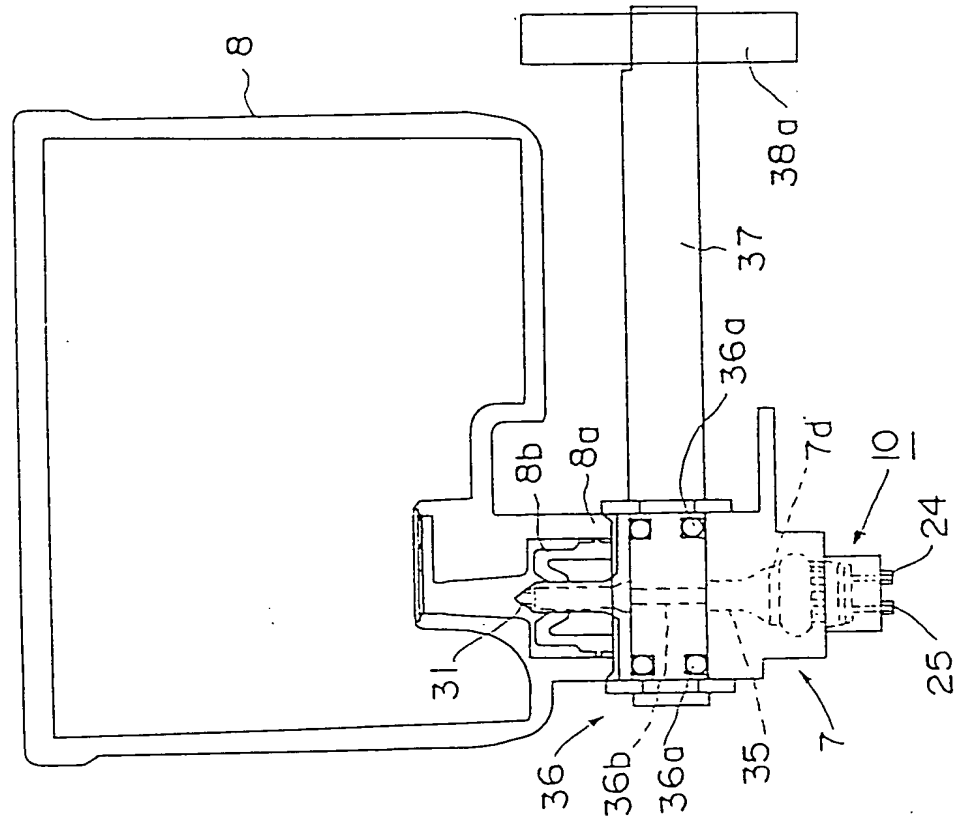


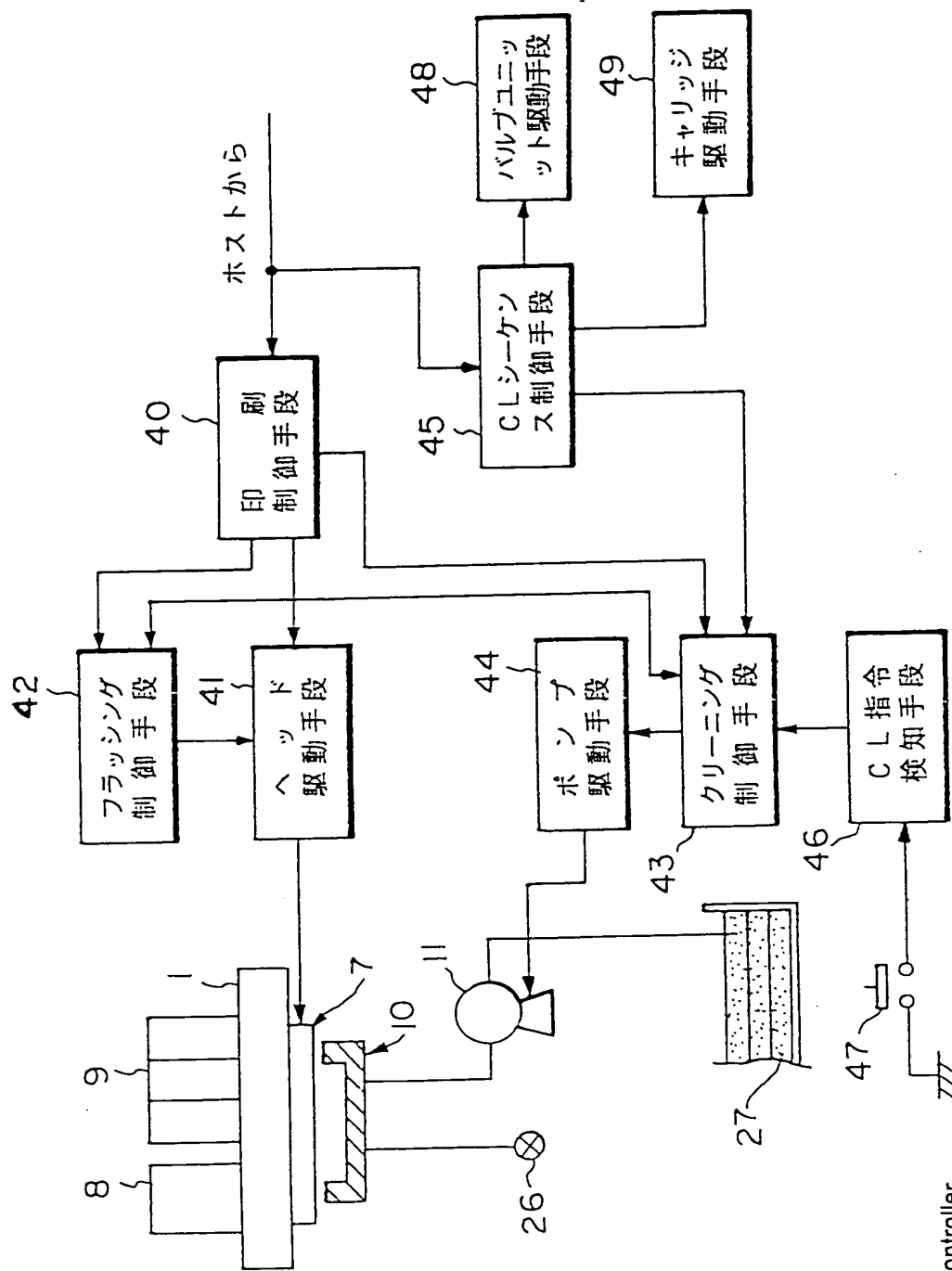
Fig. 4A

~~10T~~



[図 5]

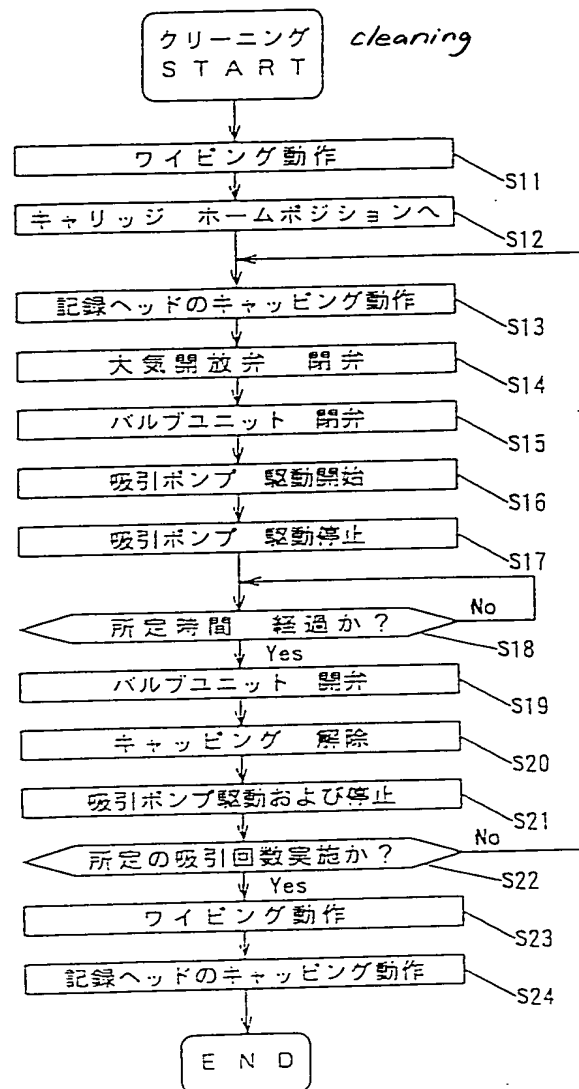
Fig. 5



- 40: print controller
- 41: head driver
- 42: flushing controller
- 43: cleaning controller
- 44: pump driver
- 45: cleaning sequence controller
- 46: cleaning command detector
- 48: valve unit driver
- 49: carriage driver

【図6】

Fig. 6



- S11: perform wiping operation
- S12: move carriage to home position
- S13: perform capping operation of recording head
- S14: close air valve
- S15: close valve unit
- S16: start driving suction pump
- S17: stop driving suction pump
- S18: predetermined time period has elapsed?
- S19: open valve unit
- S20: release capping
- S21: drive and stop suction pump
- S22: ink has been sucked predetermined number of times?
- S23: perform wiping operation
- S24: perform capping operation of recording head

Fig. 7

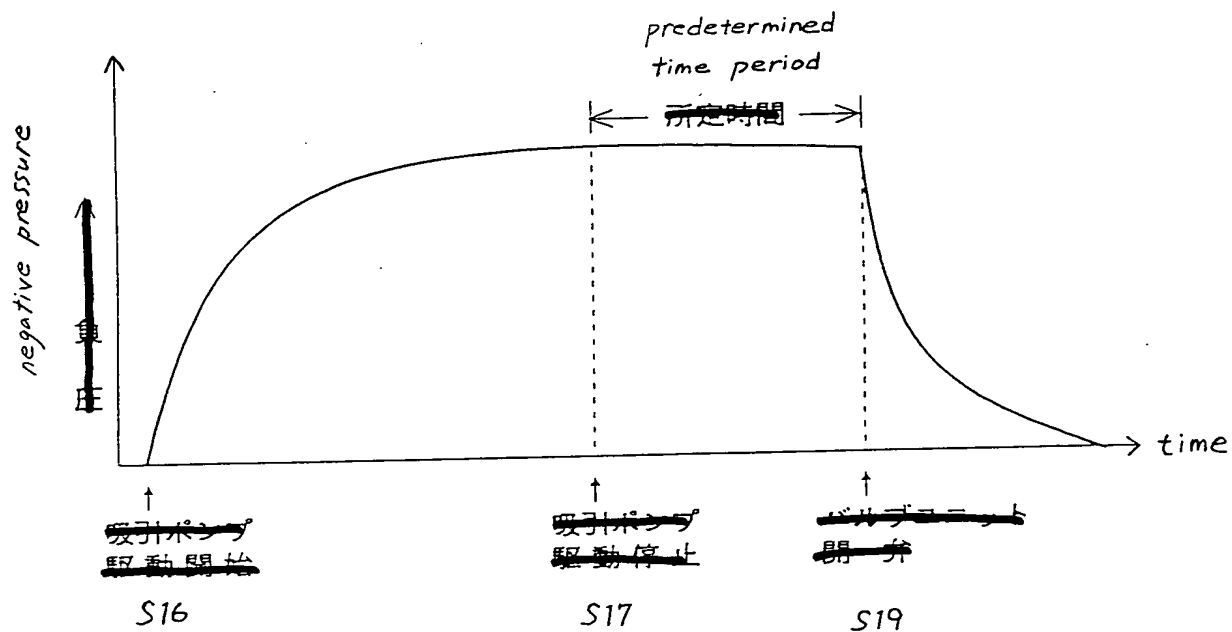
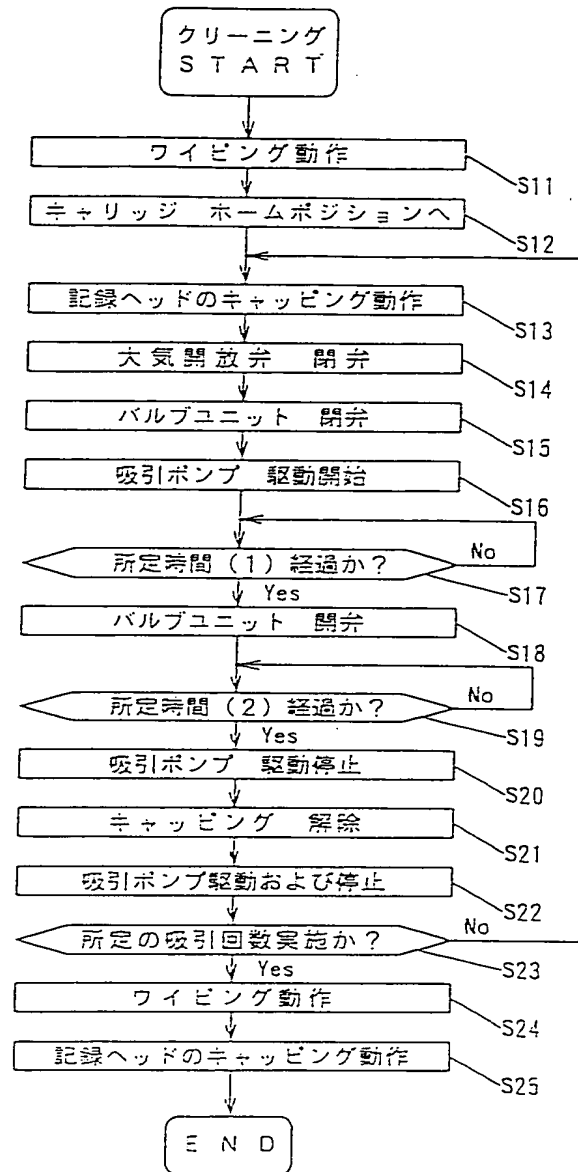


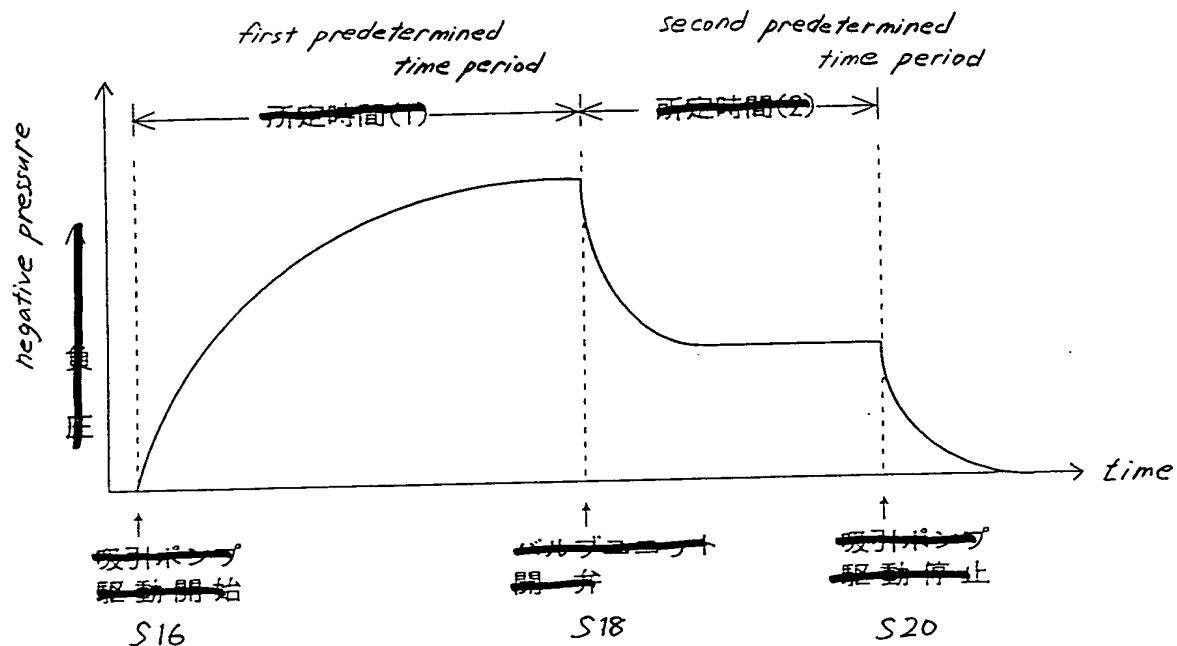
Fig. 8



- S11: perform wiping operation
 S12: move carriage to home position
 S13: perform capping operation of recording head
 S14: close air valve
 S15: close valve unit
 S16: start driving suction pump
 S17: first predetermined time period has elapsed?
 S18: open valve unit
 S19: second predetermined time period has elapsed?
 S20: stop driving suction pump
 S21: release capping
 S22: drive and stop suction pump
 S23: ink has been sucked predetermined number of times?
 S24: perform wiping operation
 S25: perform capping operation of recording head

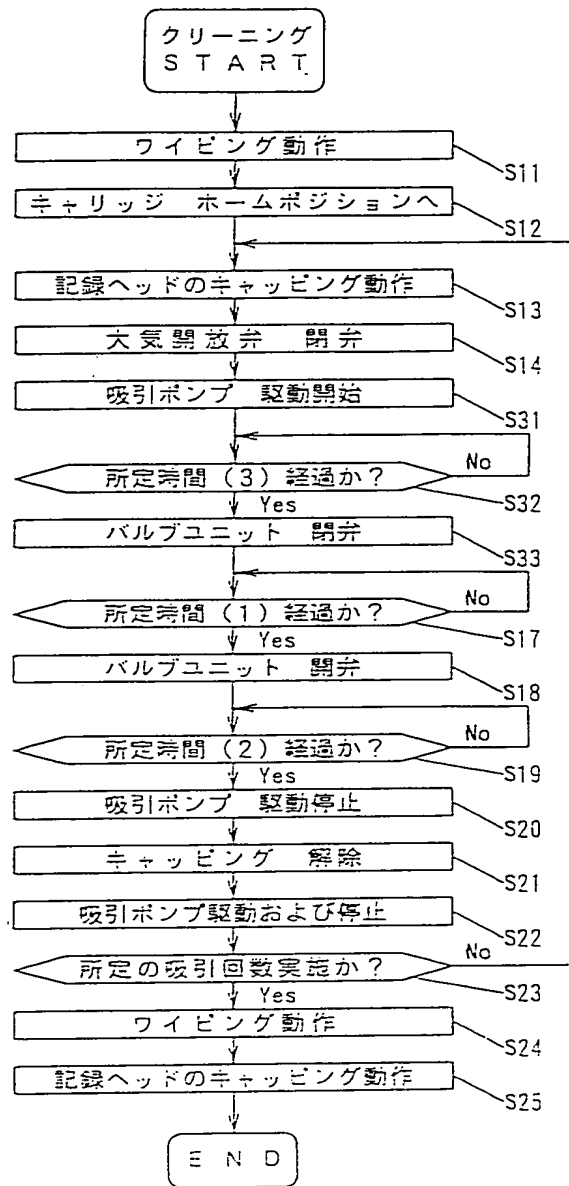
Fig. 9

【図 9】



【図 8】

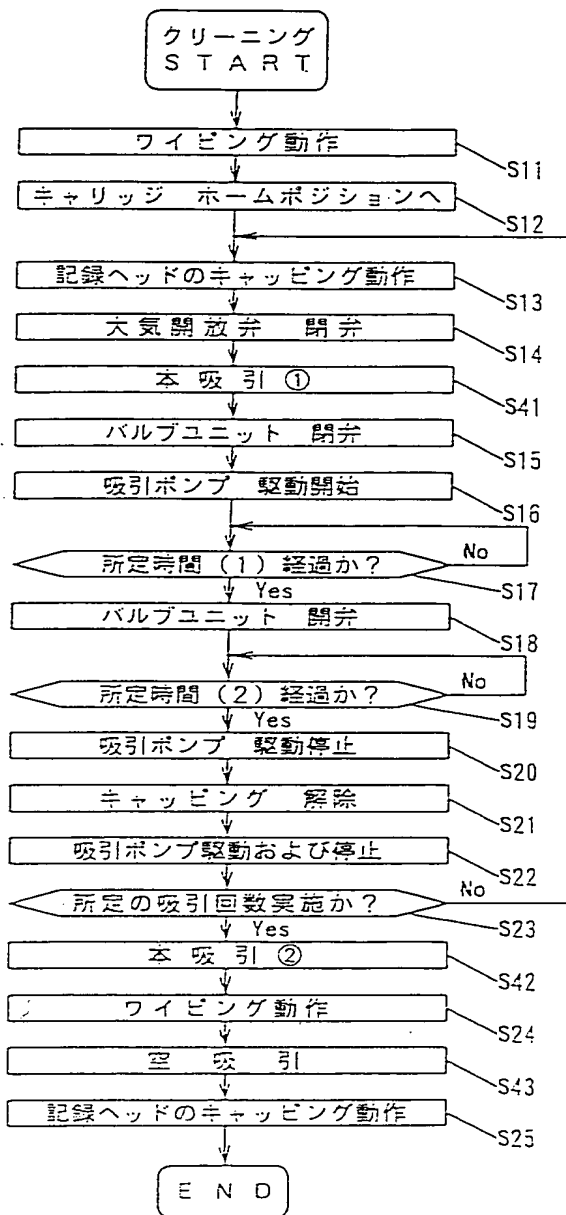
Fig. 10



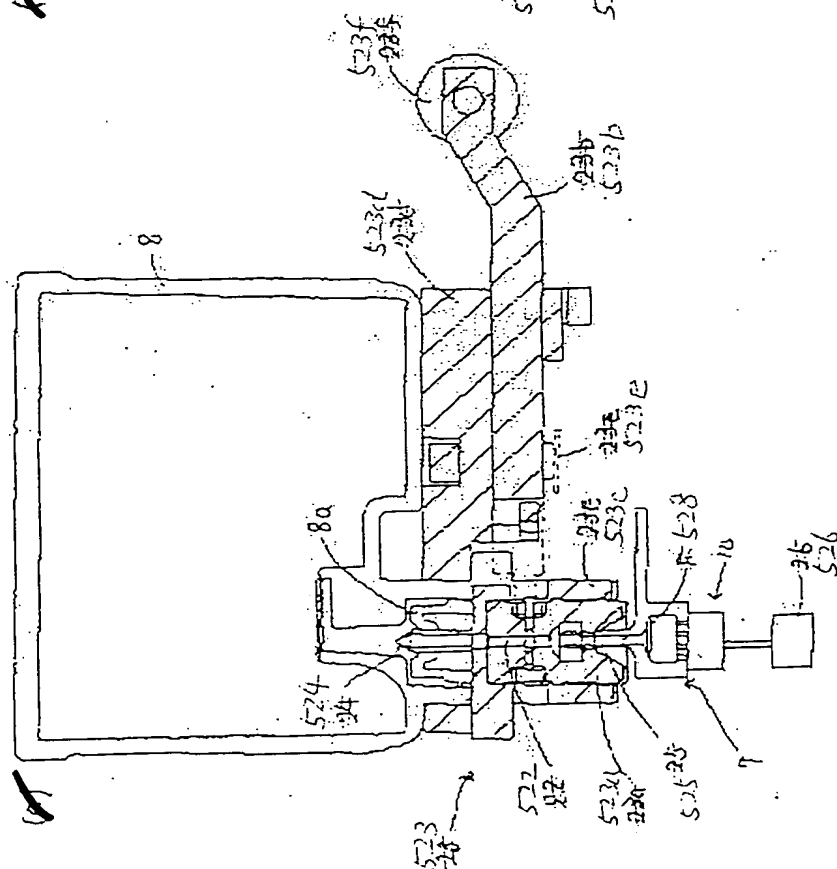
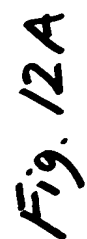
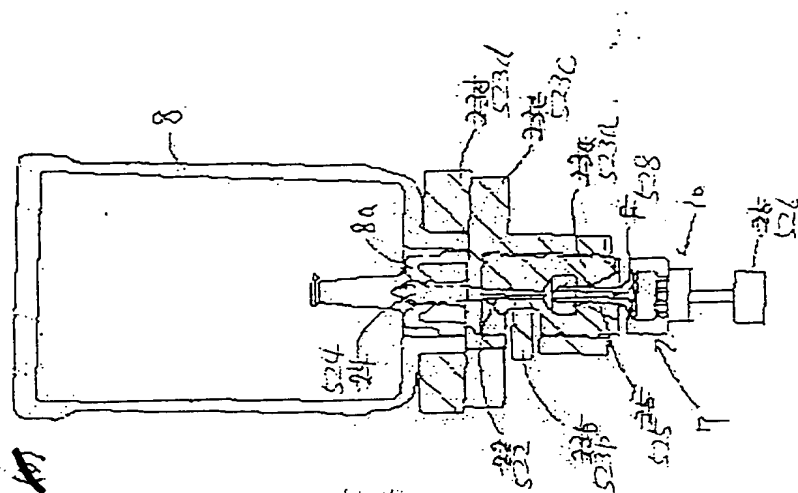
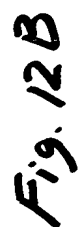
- S11: perform wiping operation
- S12: move carriage to home position
- S13: perform capping operation of recording head
- S14: close air valve
- S31: start driving suction pump
- S32: third predetermined time period has elapsed?
- S33: close valve unit
- S17: first predetermined time period has elapsed?
- S18: open valve unit
- S19: second predetermined time period has elapsed?
- S20: stop driving suction pump
- S21: release capping
- S22: drive and stop suction pump
- S23: ink has been sucked predetermined number of times?
- S24: perform wiping operation
- S25: perform capping operation of recording head

【図 5】

Fig. 11

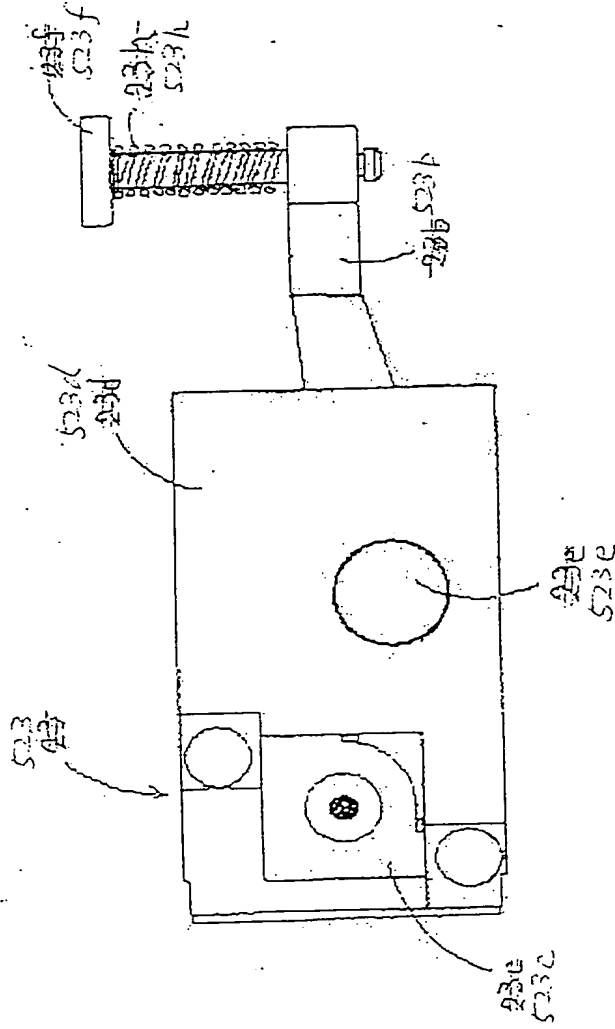


- S11: perform wiping operation
 S12: move carriage to home position
 S13: perform capping operation of recording head
 S14: close air valve
 S41: perform first substantial suction
 S15: close valve unit
 S16: start driving suction pump
 S17: first predetermined time period has elapsed?
 S18: open valve unit
 S19: second predetermined time period has elapsed?
 S20: stop driving suction pump
 S21: release capping
 S22: drive and stop suction pump
 S23: ink has been sucked predetermined number of times?
 S42: perform second substantial suction
 S24: perform wiping operation
 S43: perform idle suction
 S25: perform capping operation of recording head



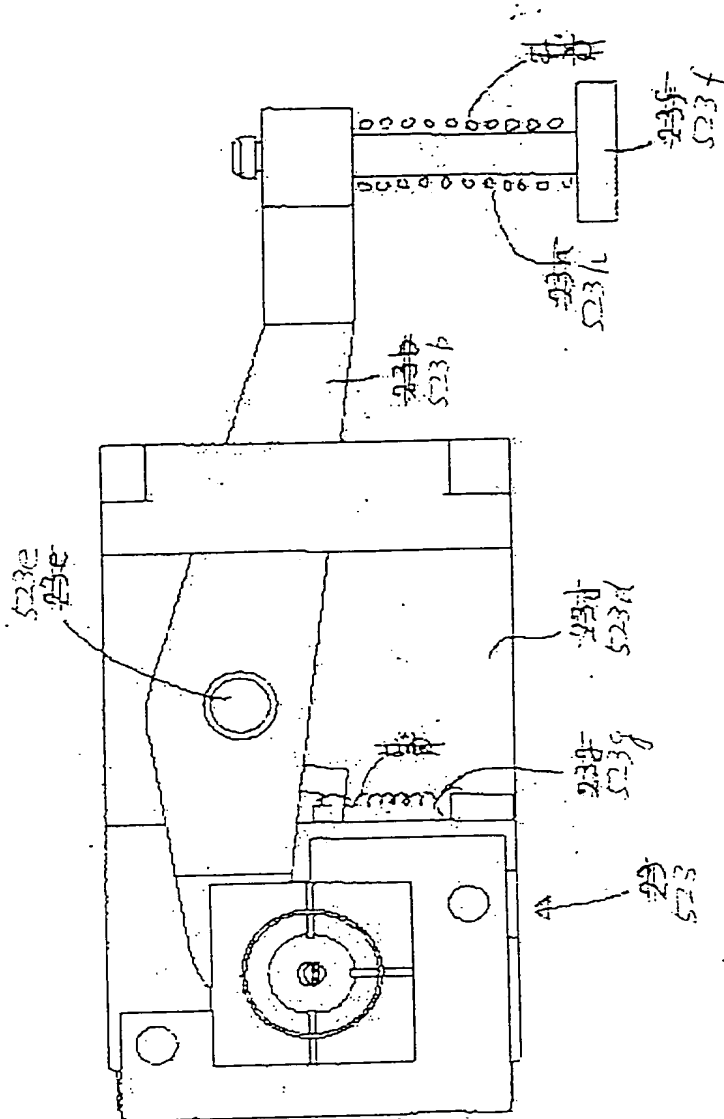
~~13~~
【図3】

Fig. 13



~~図 4~~

Fig. 14



~~【図5】~~

Fig. 15C

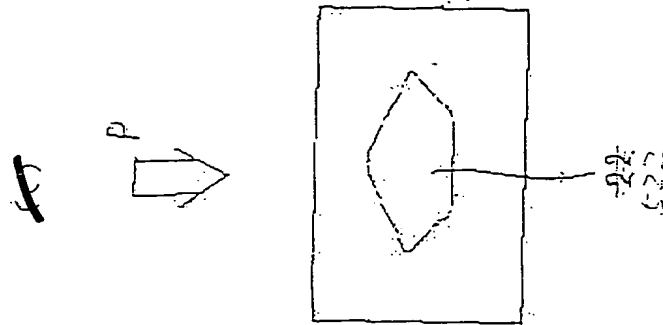


Fig. 15B

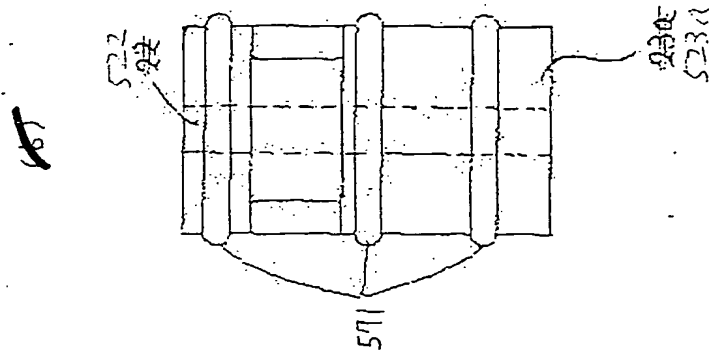
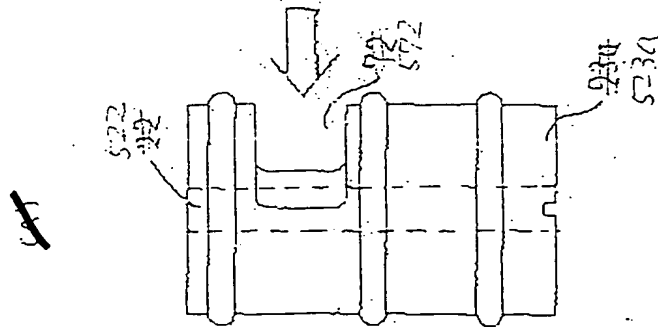


Fig. 15A



~~【凶 7】~~

Fig. 17B

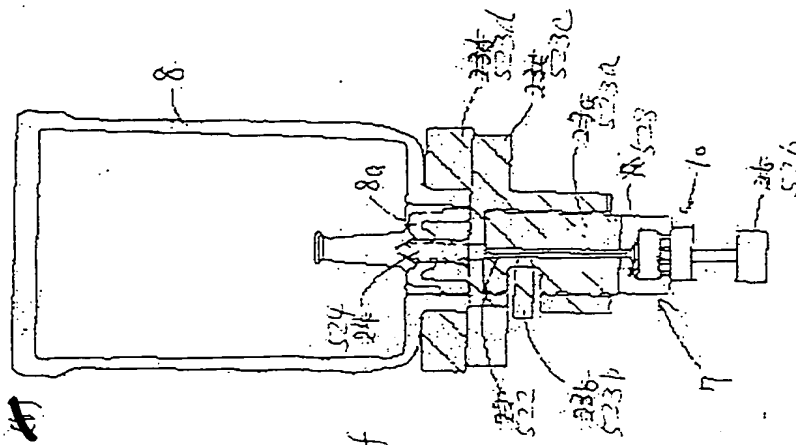
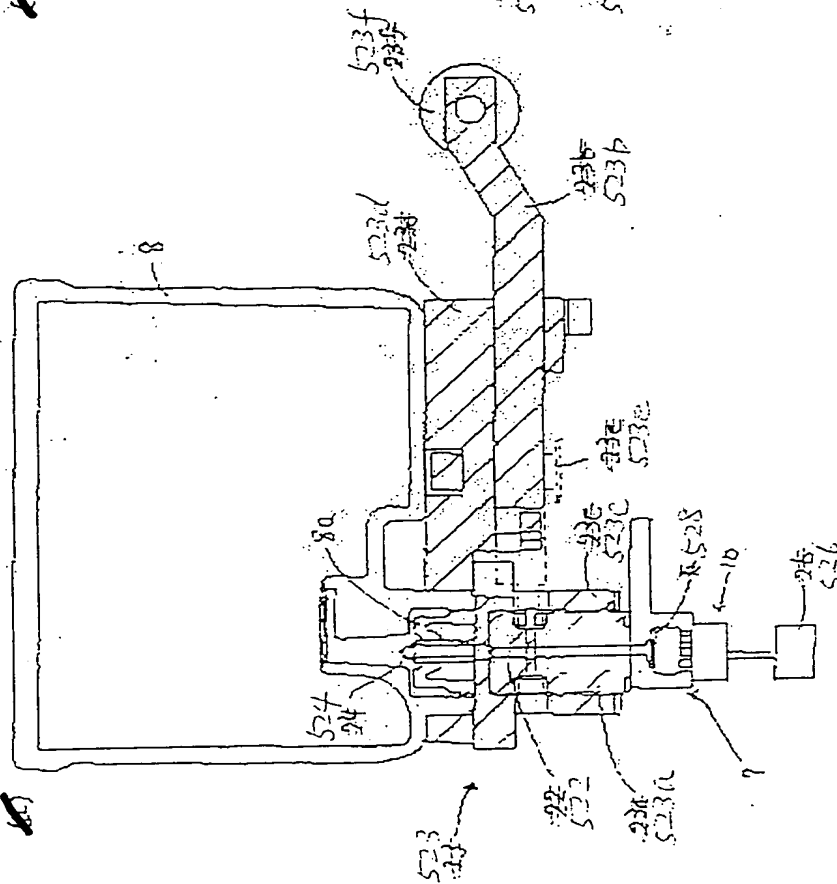


Fig. 17A



18
[図8]

Fig. 18A

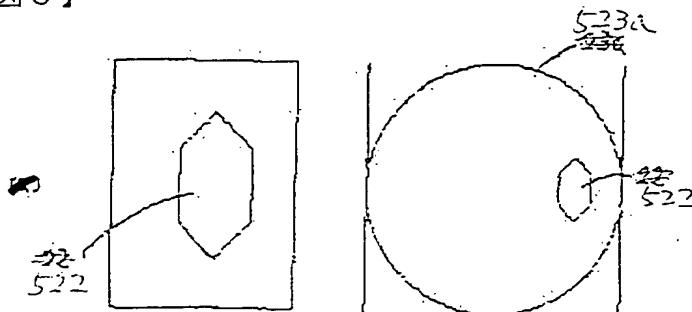


Fig. 18B

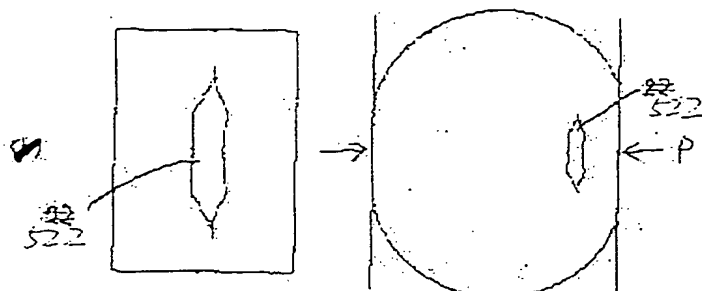


Fig. 18C

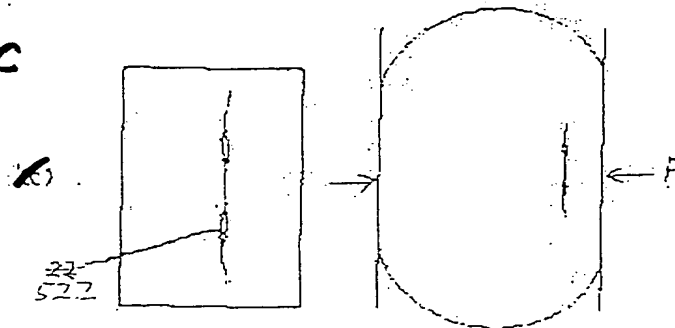
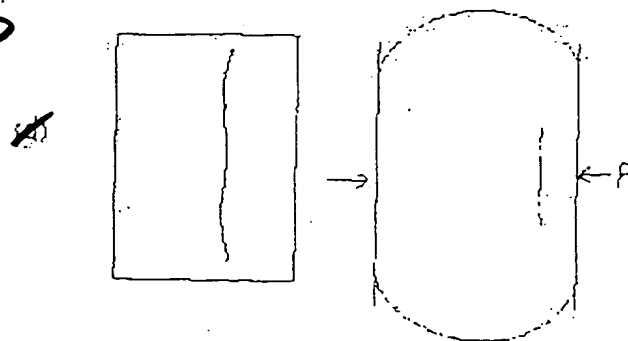


Fig. 18D



【図9】

Fig. 19A

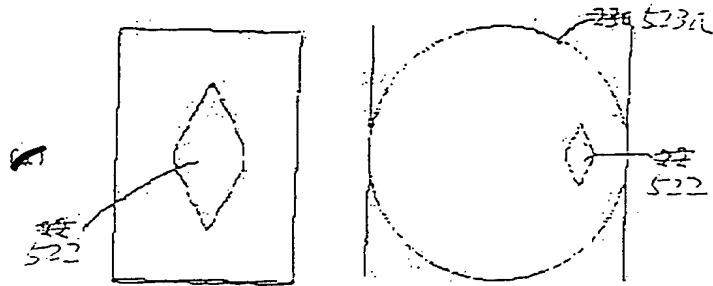


Fig. 19B

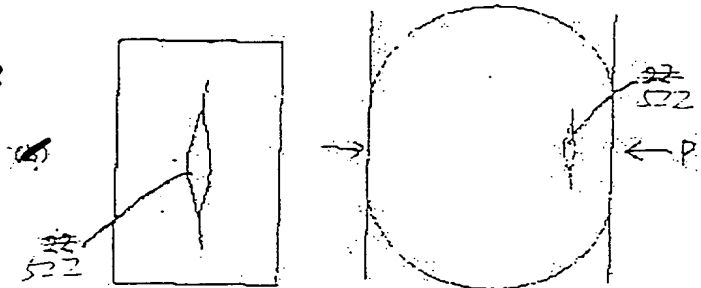


Fig. 19C

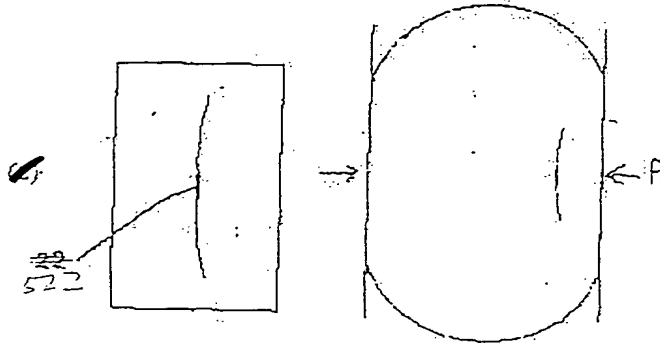
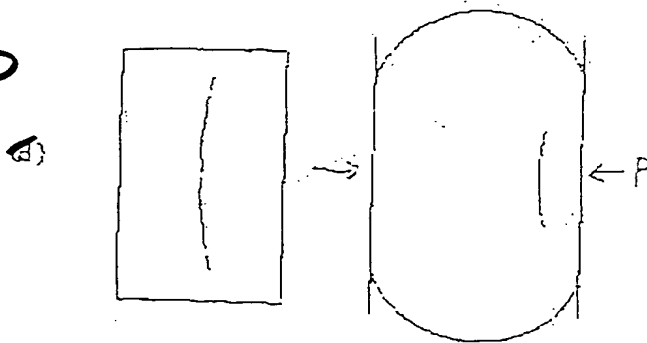


Fig. 19D



~~[図 10]~~

Fig. 20A

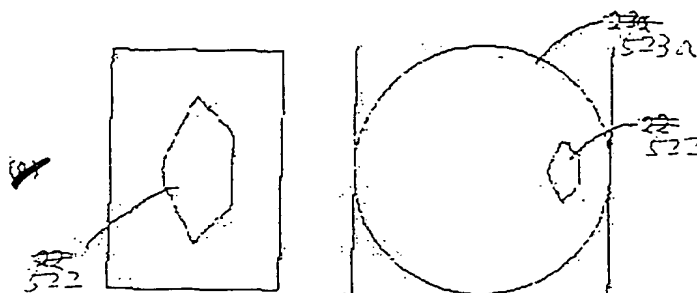


Fig. 20B

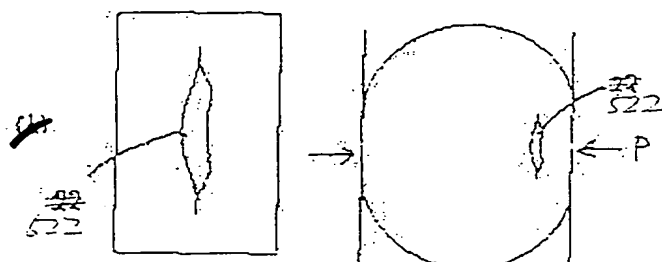


Fig. 20C

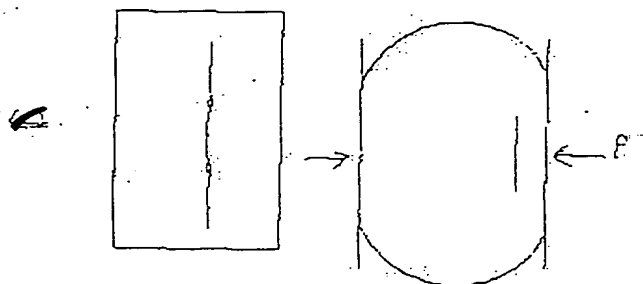
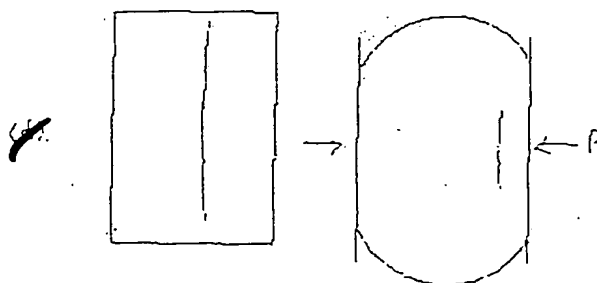


Fig. 20D



~~【図1】~~

Fig. 21A

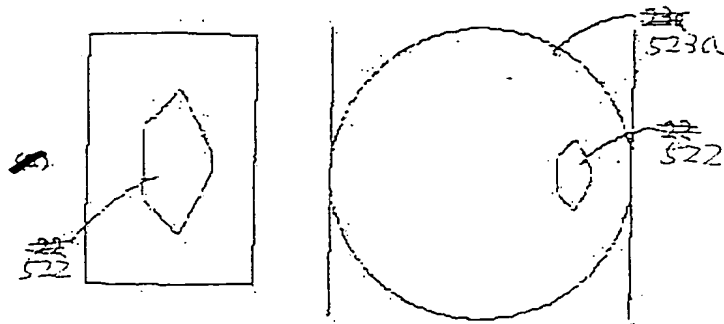


Fig. 21B

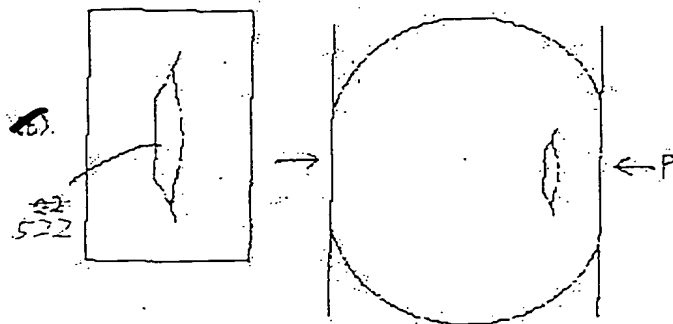
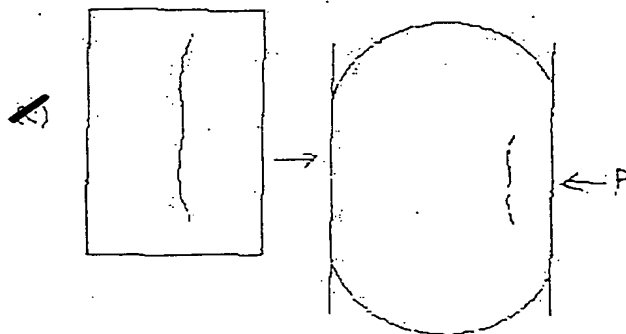
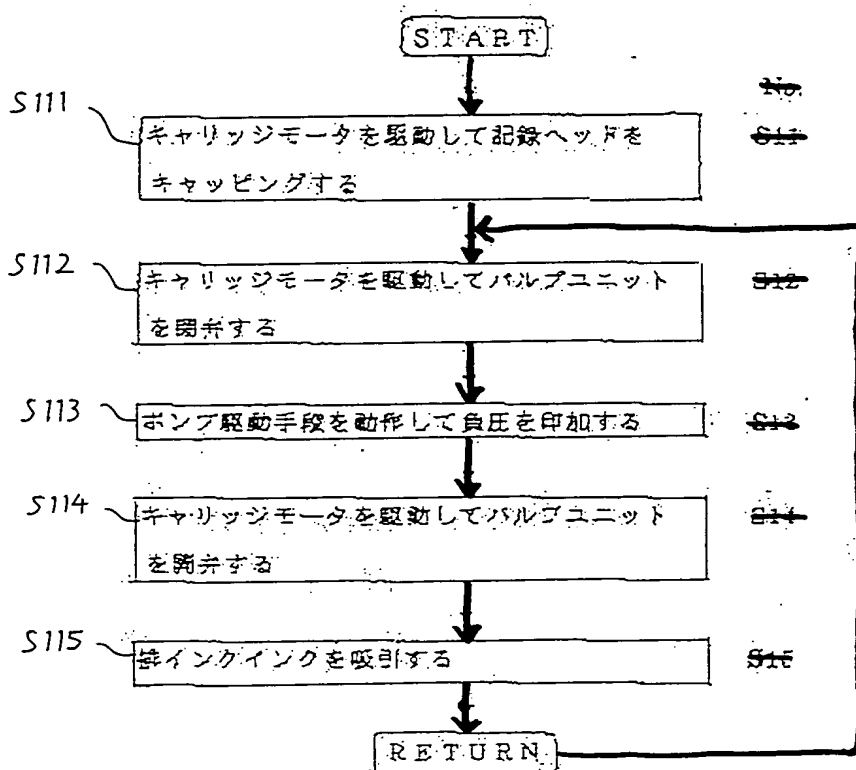


Fig. 21C



22
【図12】

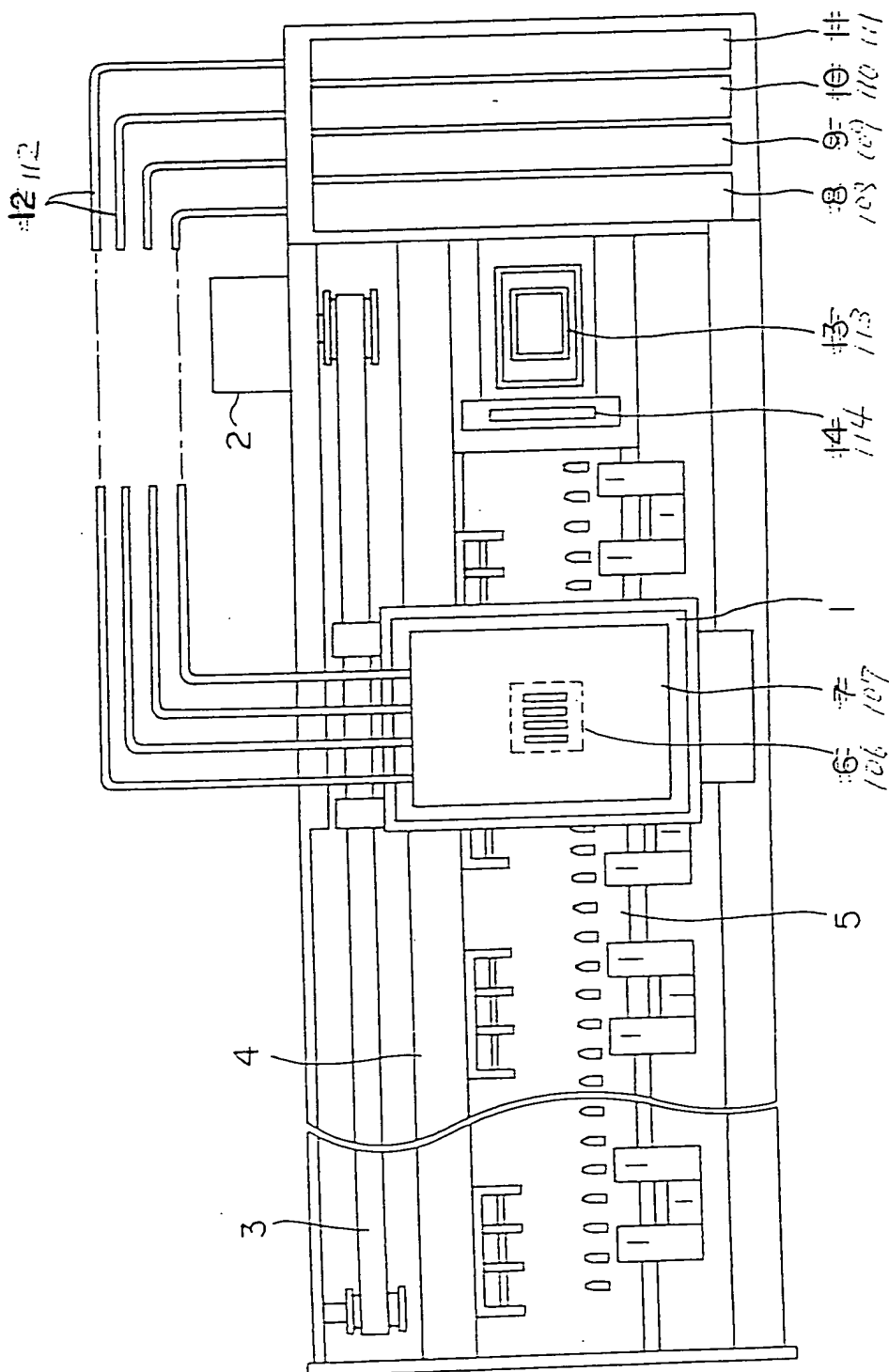
Fig. 22



- S111: drive carriage motor and cap recording head
- S112: drive carriage motor and close valve unit
- S113: operate pump driver for applying negative pressure
- S114: drive carriage motor and open valve unit
- S115: suck waste ink

Fig. 23

【图 4】



~~24~~
【图 10】

Fig. 24

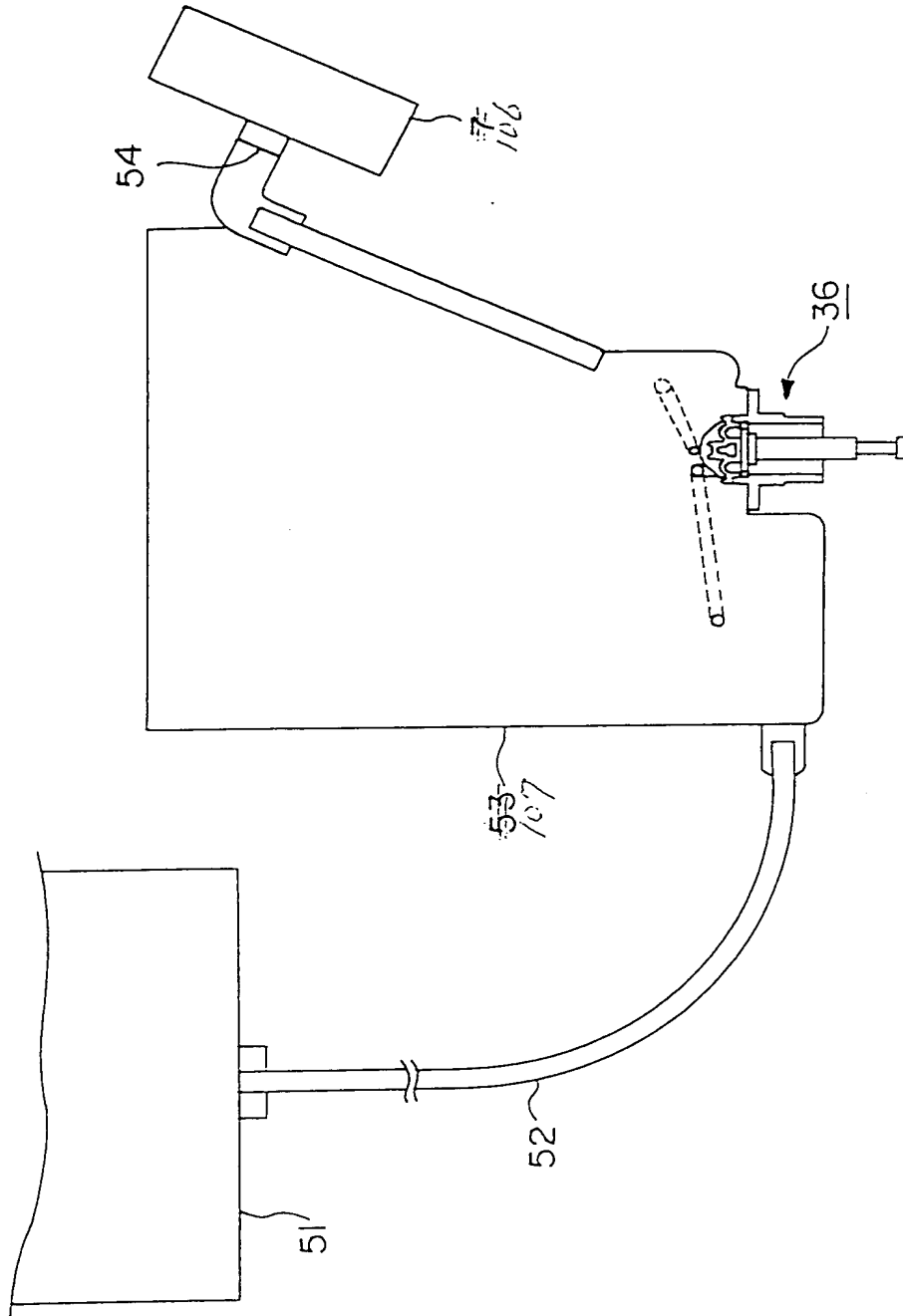


Fig. 25

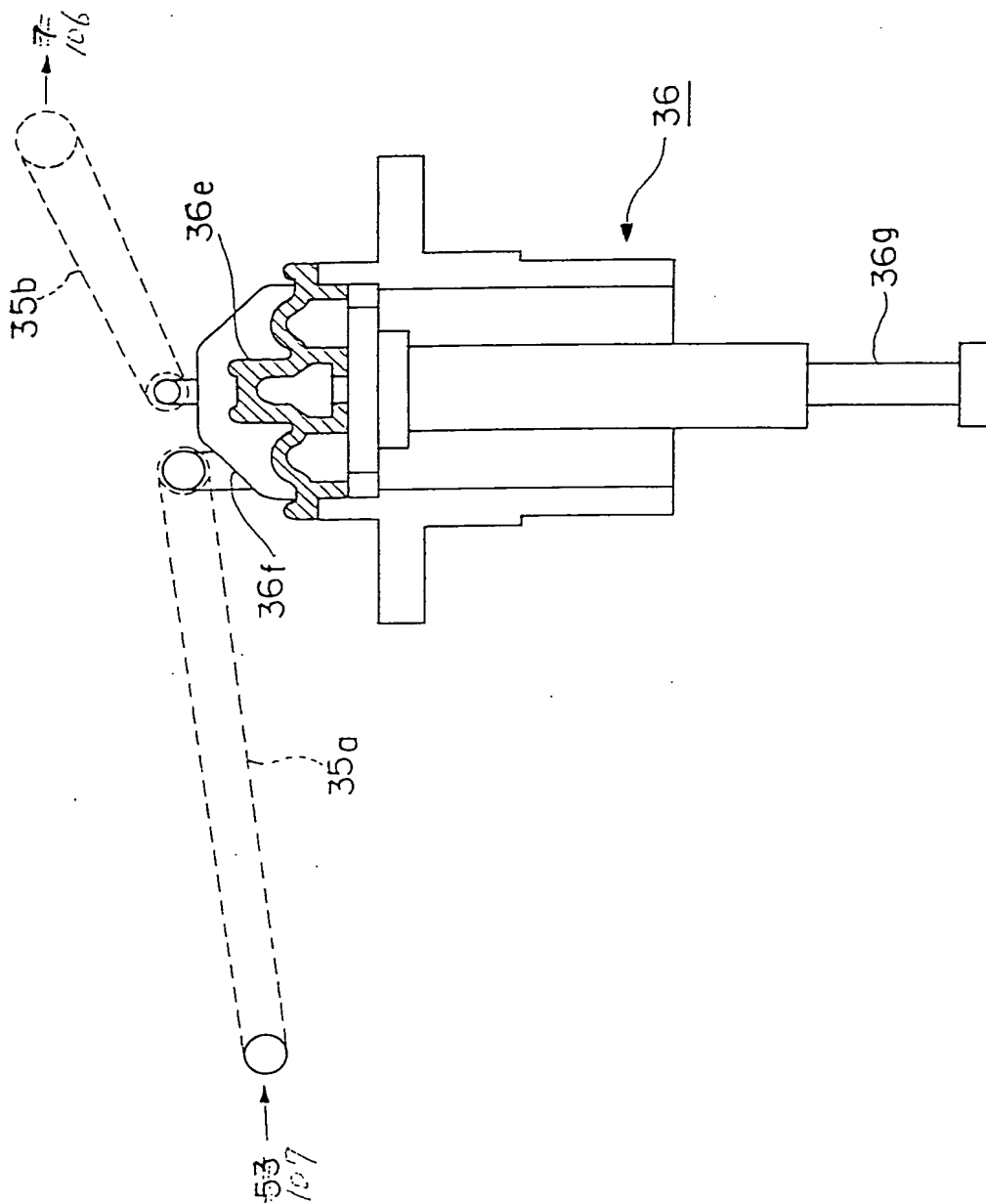


Fig. 27

【図 27】

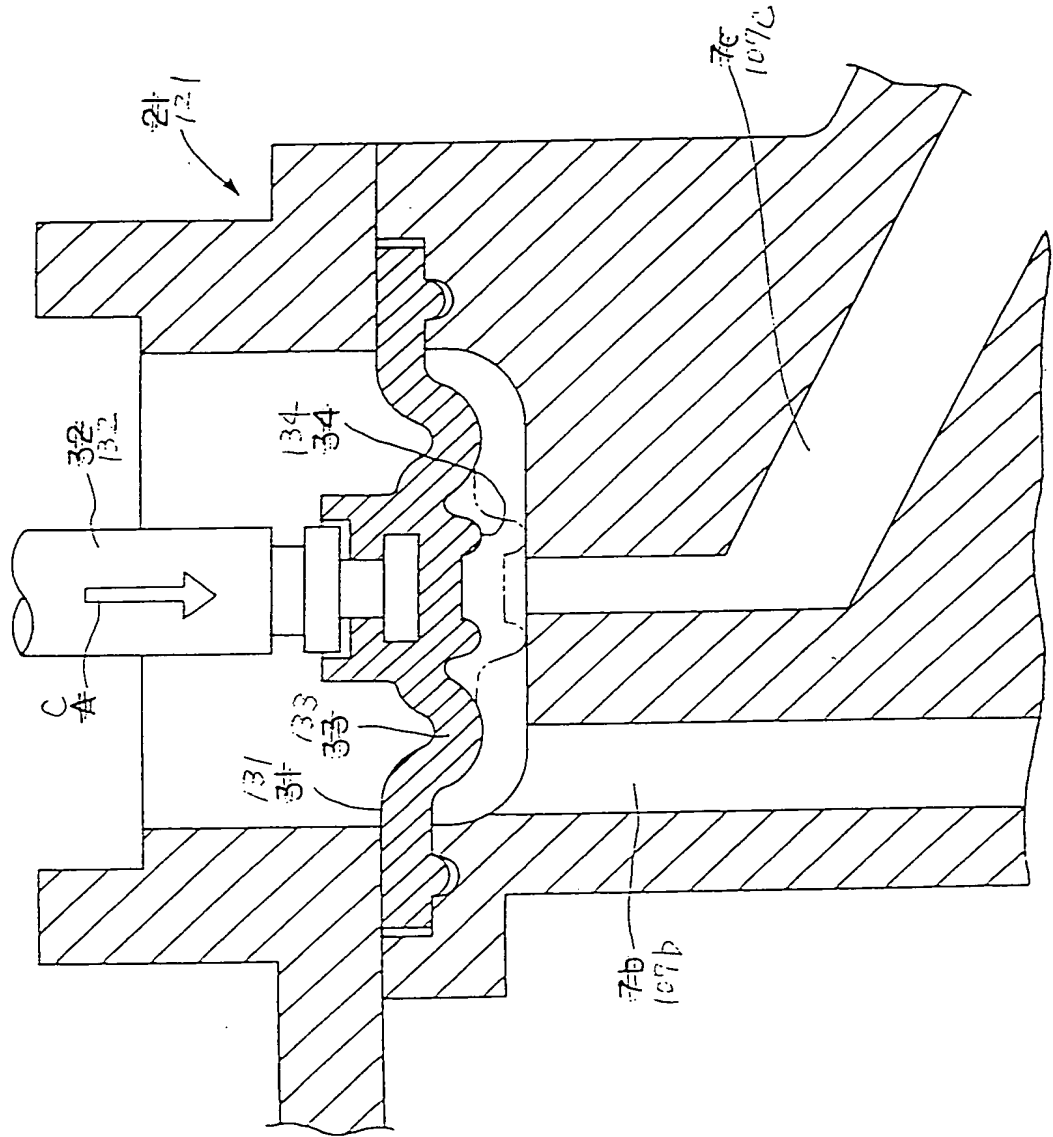


Fig. 28

~~28~~
[4]

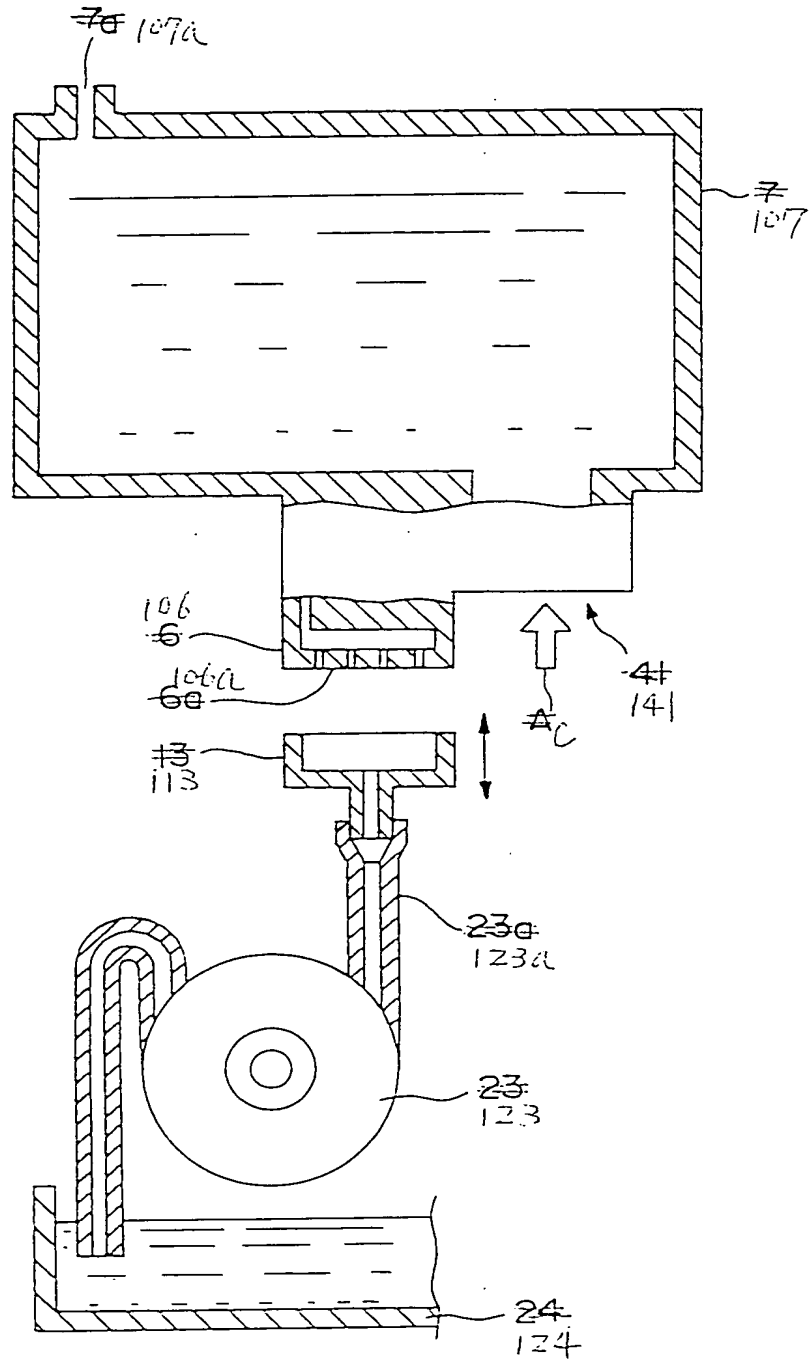
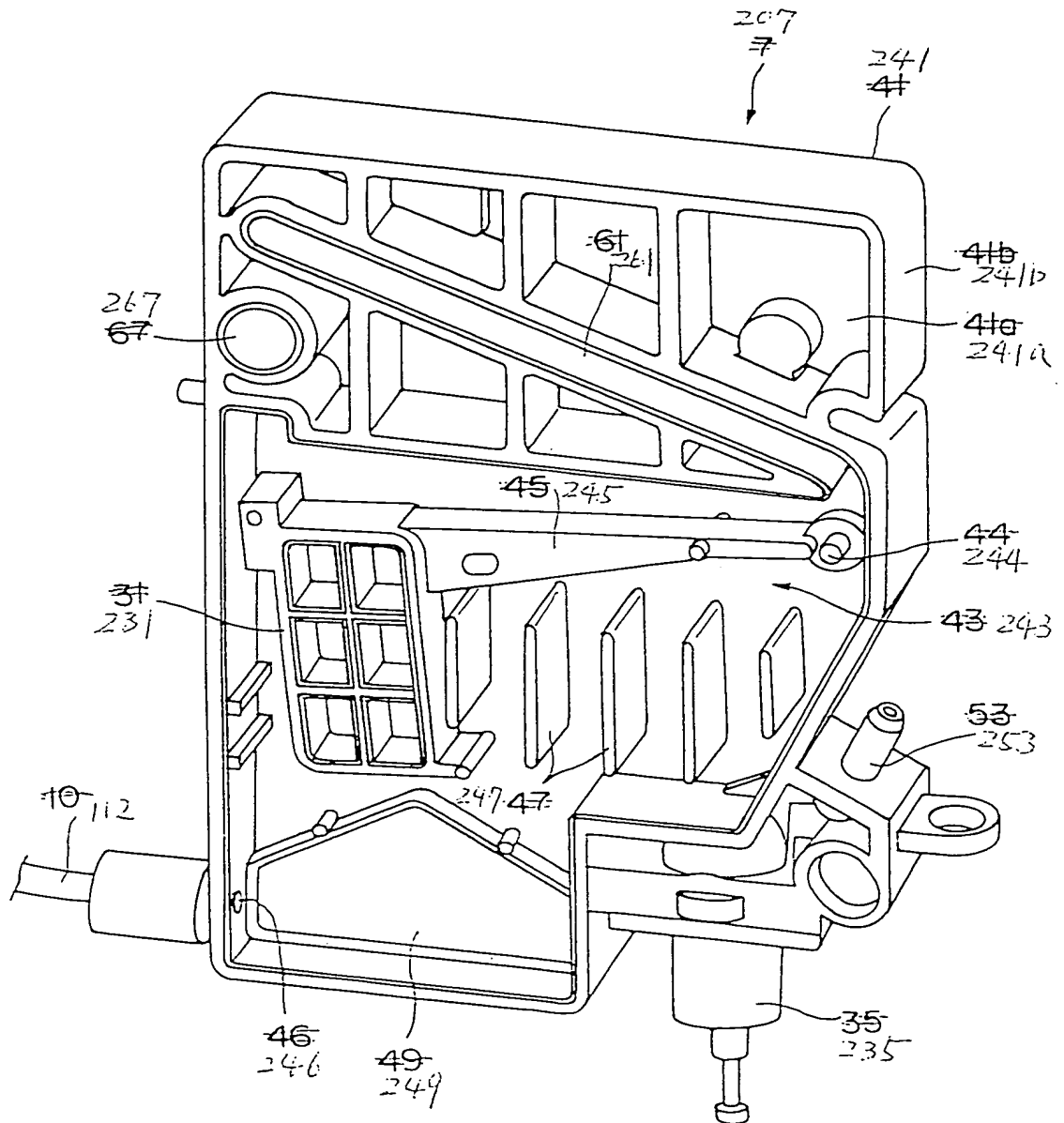


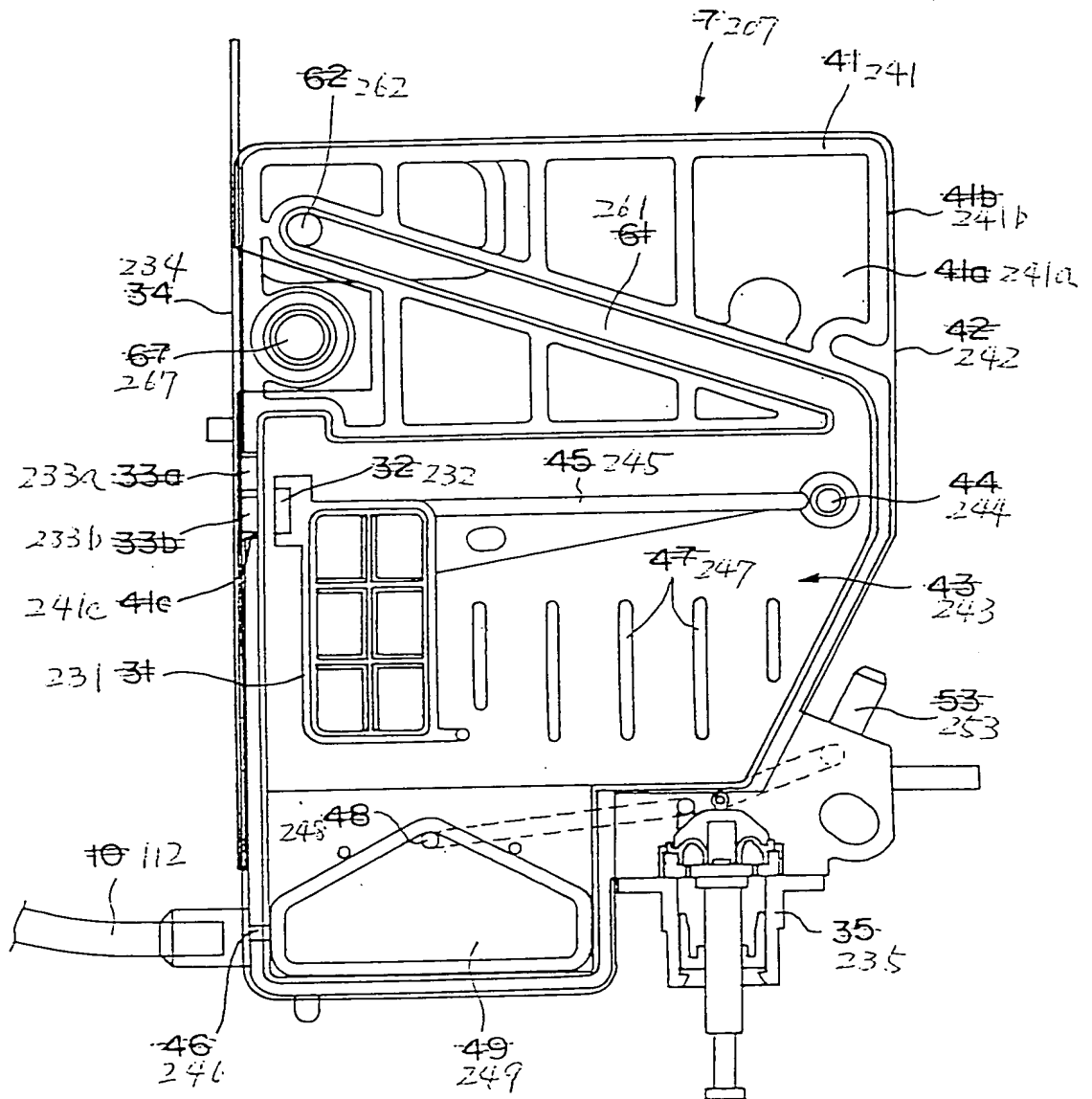
Fig. 31

~~31~~
【図3】



32
[图 4]

Fig. 32



2025 RELEASE UNDER E.O. 14176

~~33~~
[5]

Fig. 33

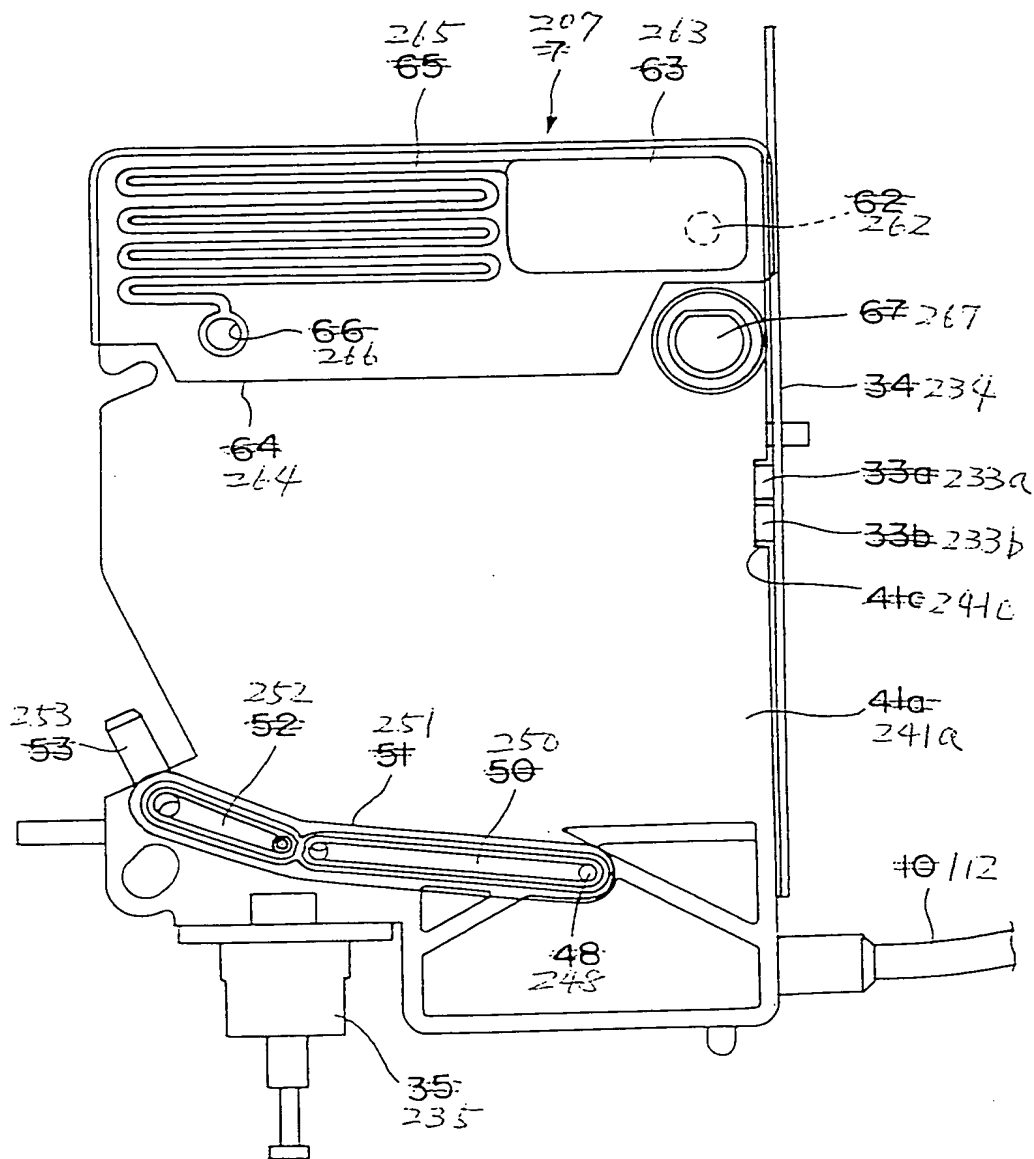
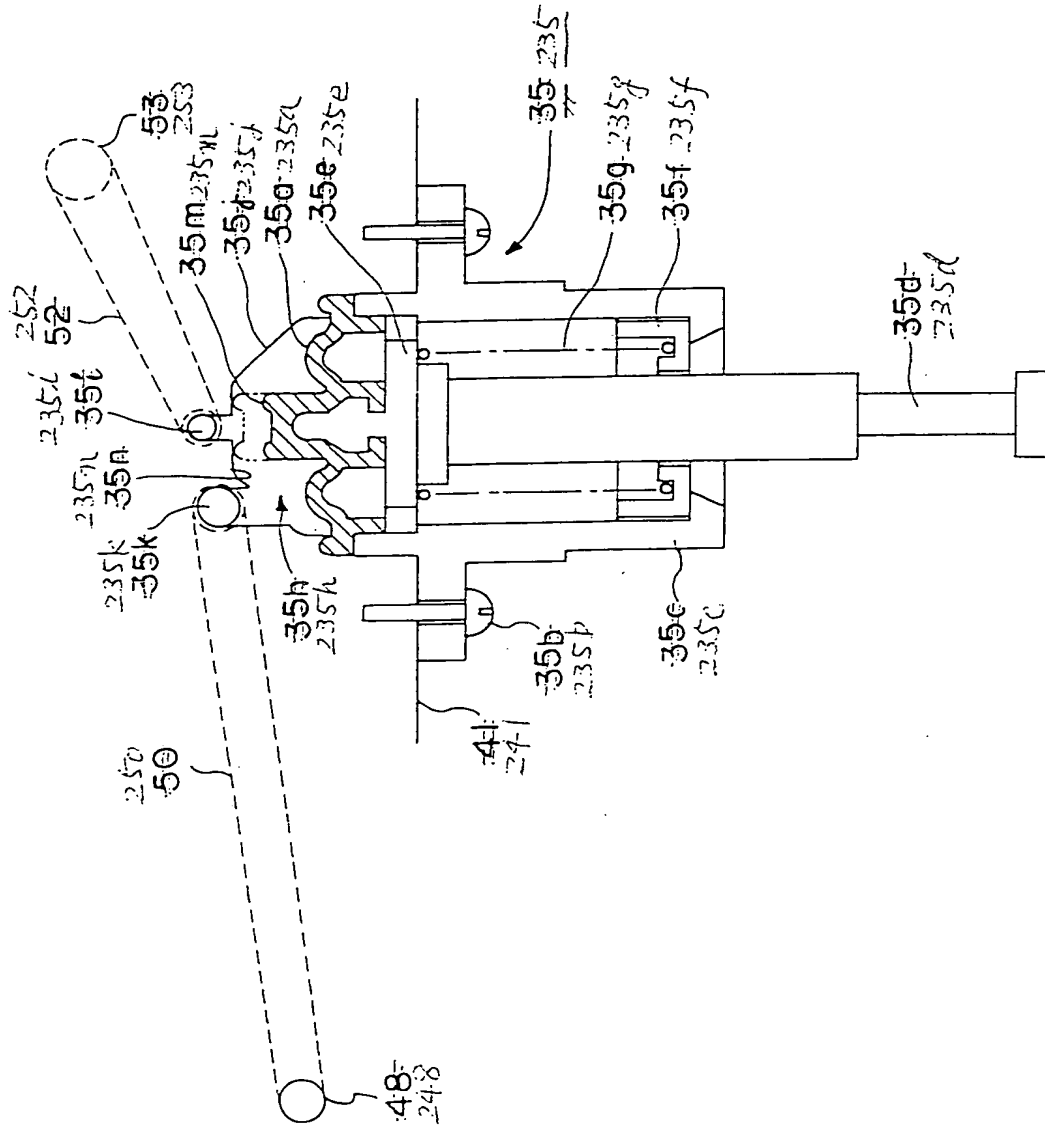


Fig. 34



[illegible]

Fig. 36

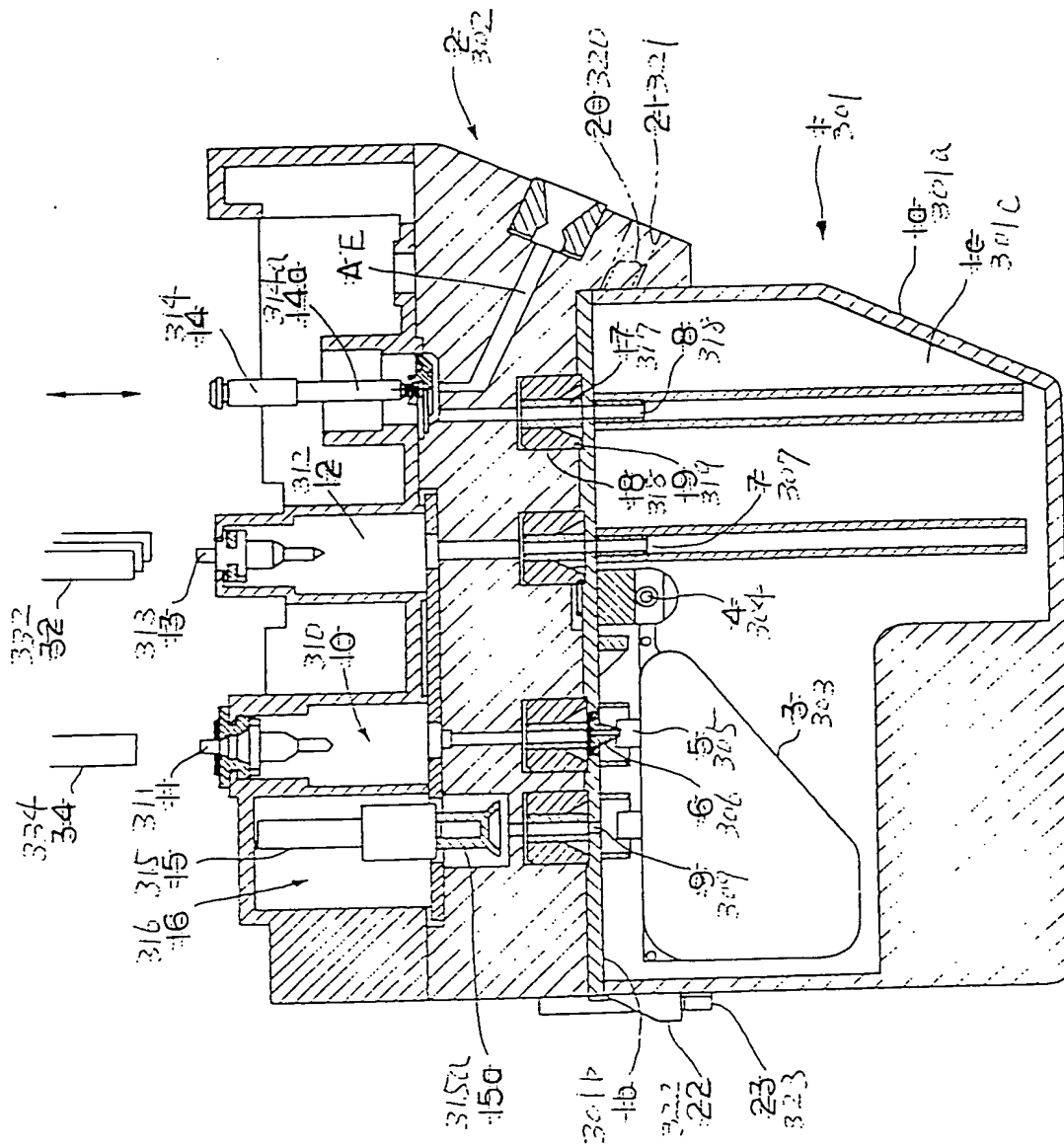


Fig. 37

37
[X 4]

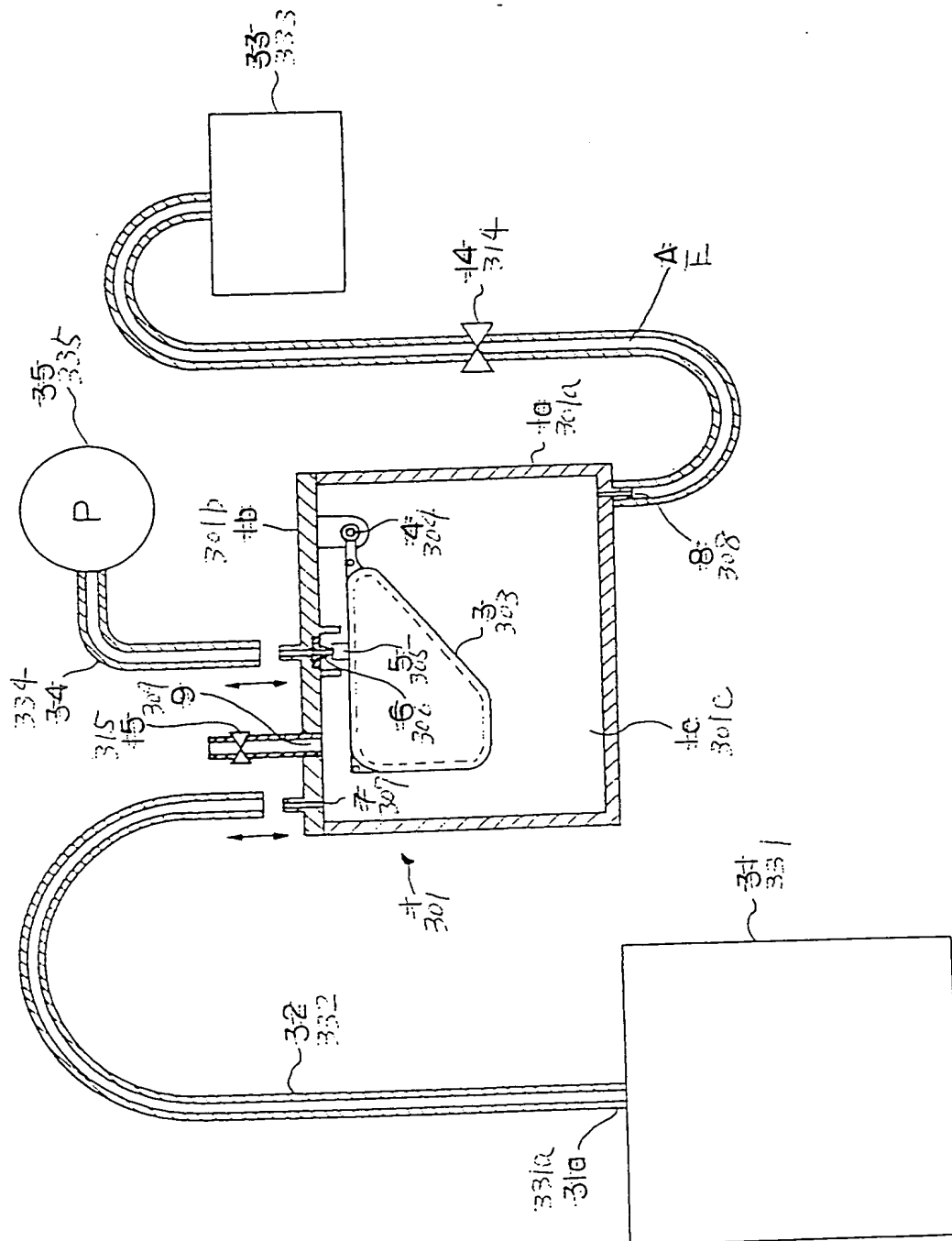


Fig. 38

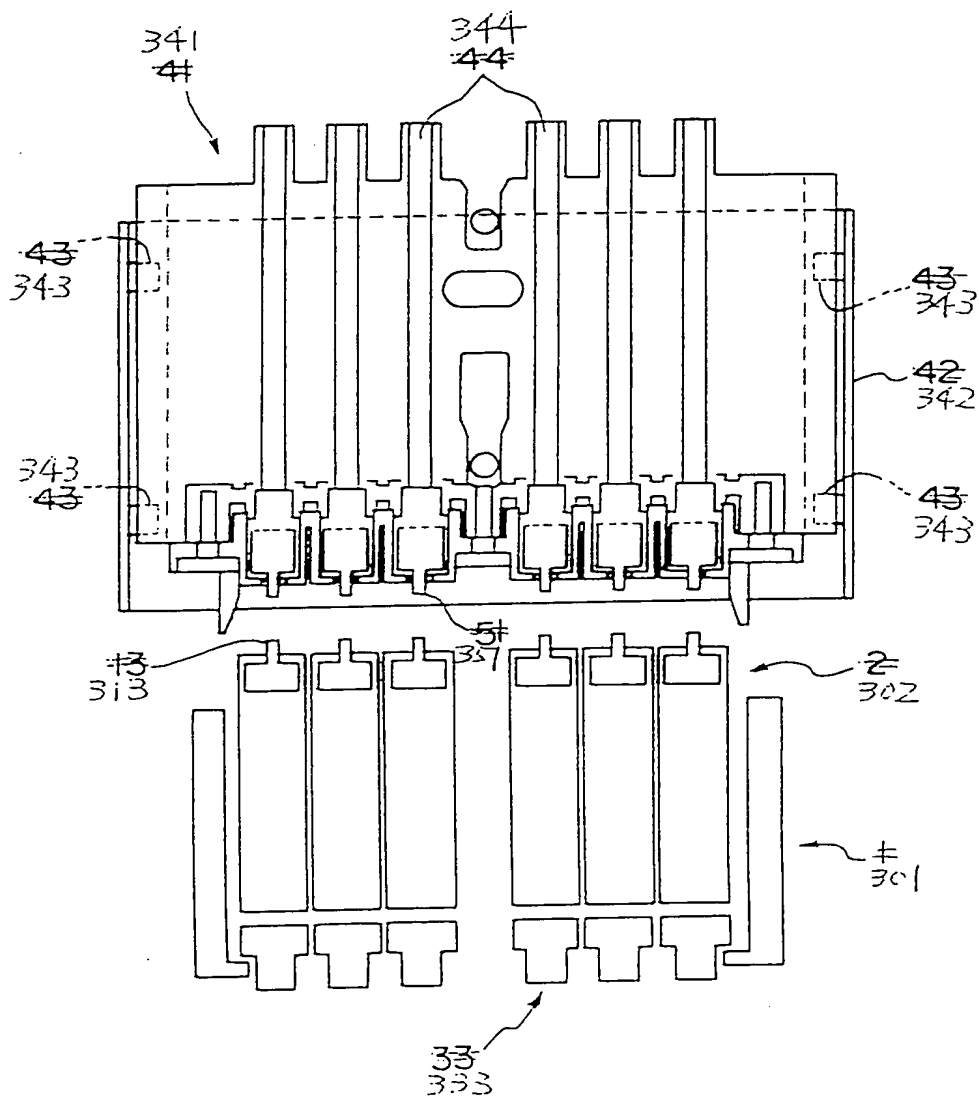


Fig. 39

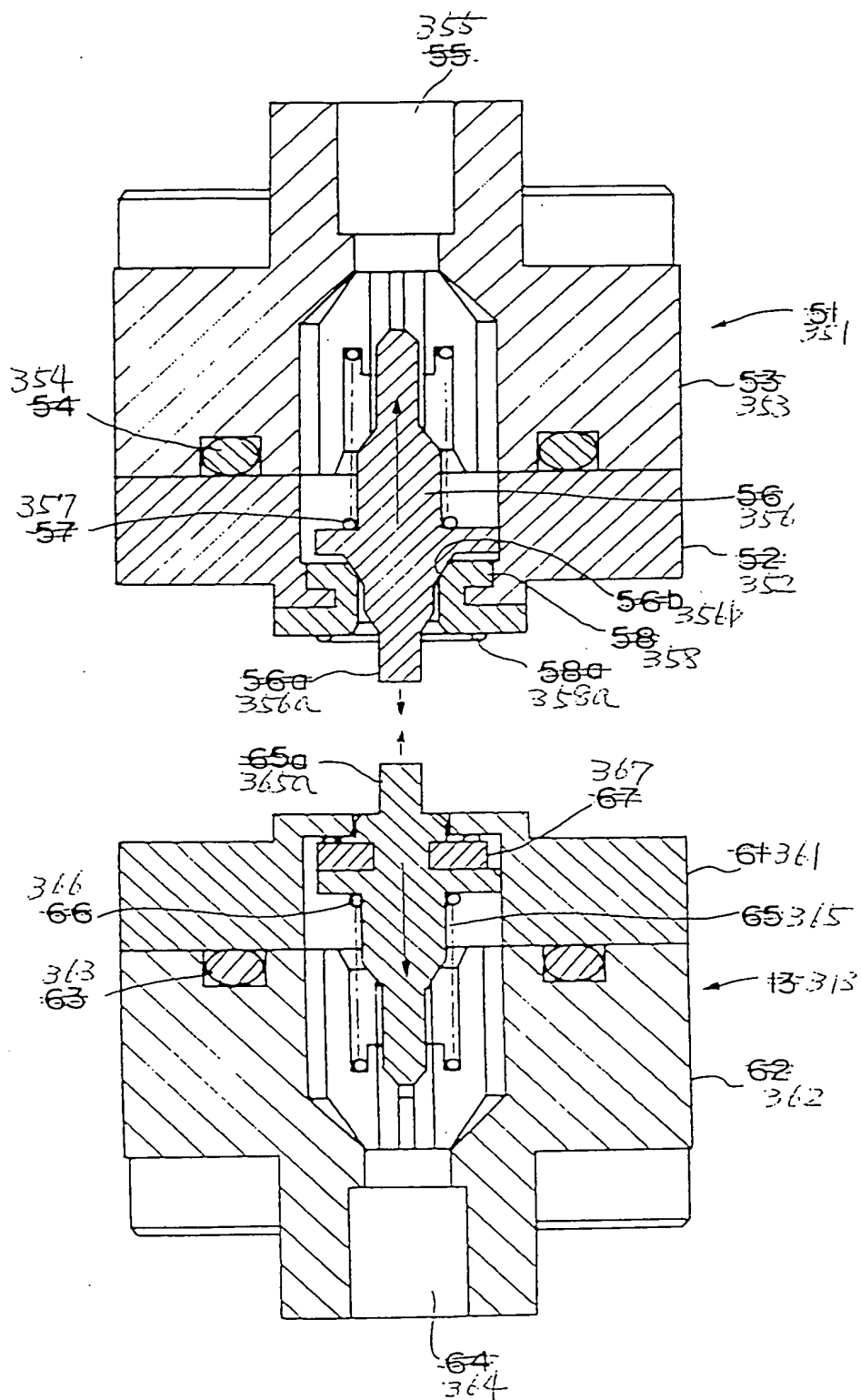
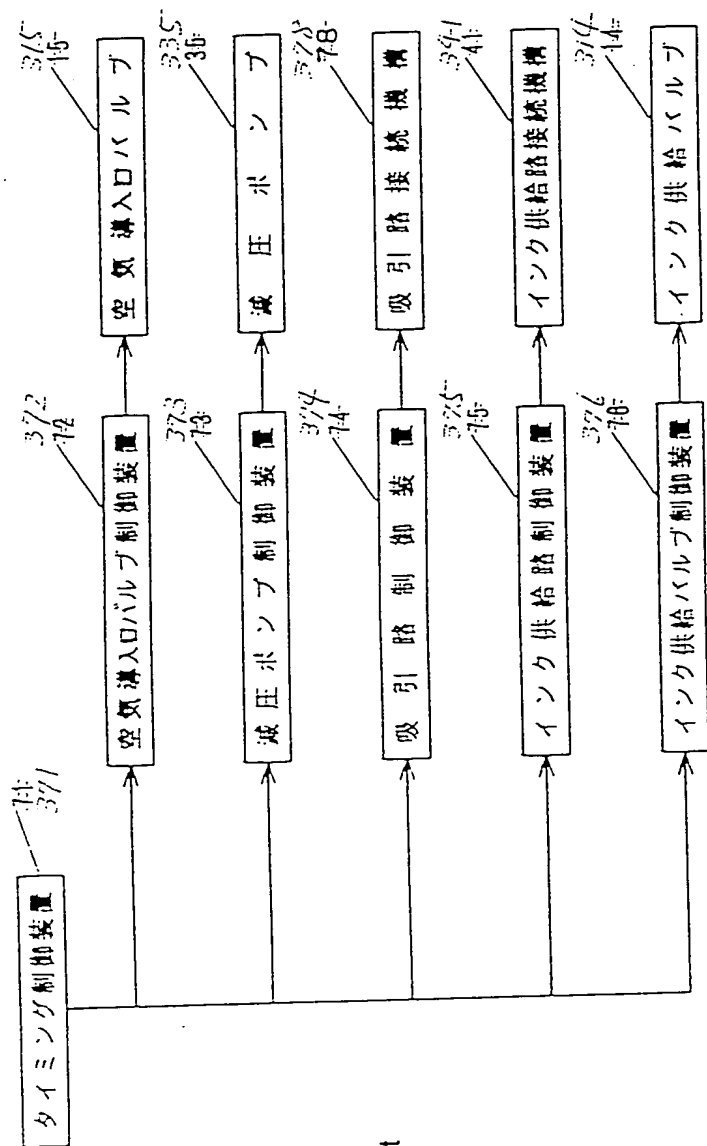
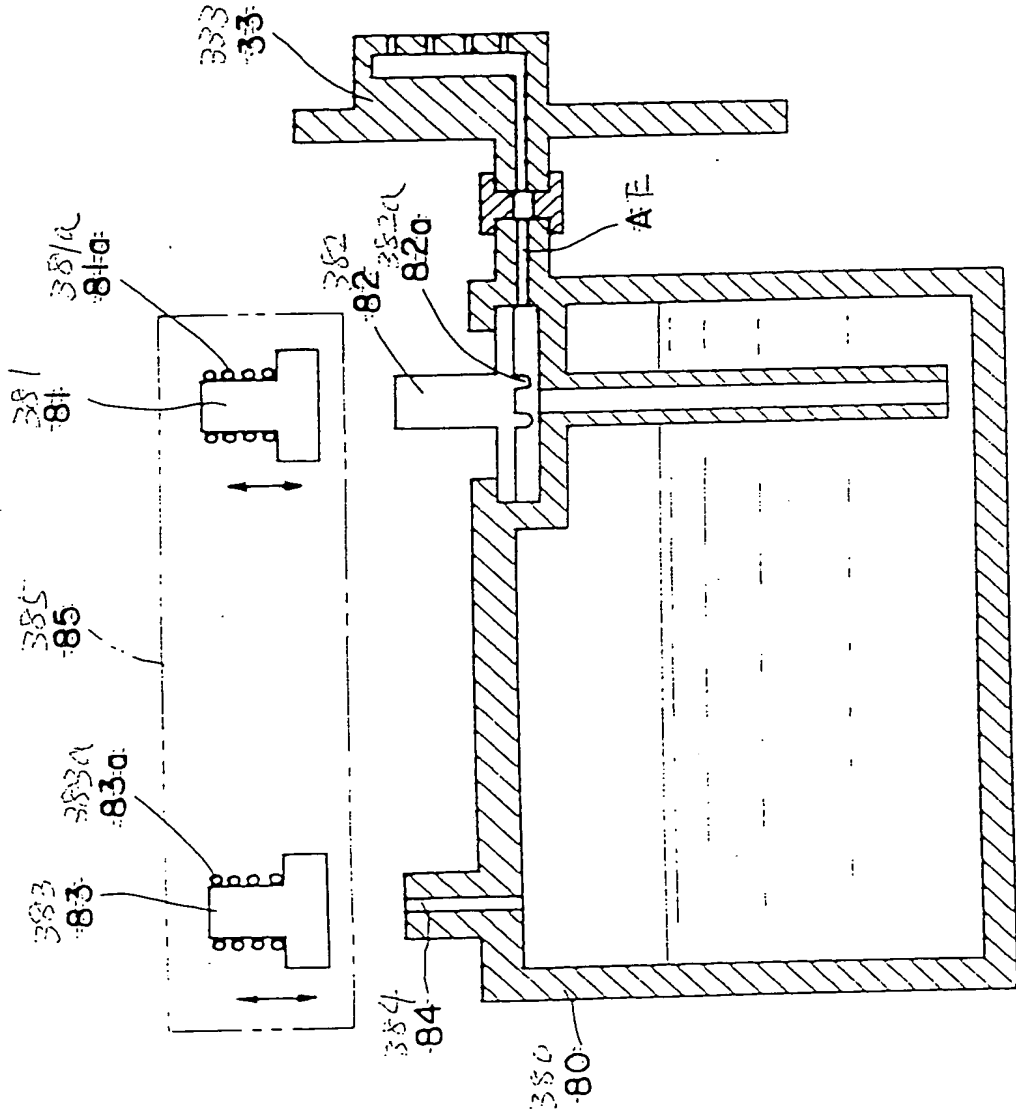


Fig. 40



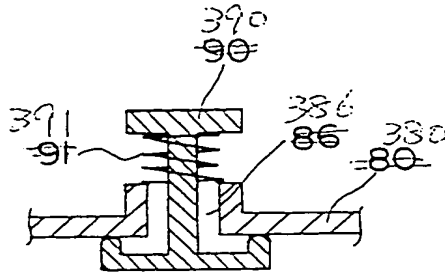
- 314: ink supply valve unit
- 315: air introduction valve
- 335: decompressor pump
- 341: ink supply passage connecting unit
- 371: timing controller
- 372: air introduction valve controller
- 373: decompressor pump controller
- 374: suction passage controller
- 375: ink supply passage controller
- 376: ink supply valve controller
- 378: suction channel connecting unit

Fig. 41



42
【~~図~~ 7】

Fig. 42



2025 11 20 14:00:00

~~43~~
【~~図 1-2~~】

Fig. 43

